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FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 1989

HEARING

BEFORE THE

COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS UNITED STATES SENATE

ONE HUNDRED FIRST CONGRESS

FIRST SESSION

ON

OVERSIGHT ON THE MONETARY POLICY REPORT TO CONGRESS PURSUANT TO THE FULL EMPLOYMENT AND BALANCED GROWTH ACT OF 1978

FEBRUARY 21, 1989

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THE FEDERAL RESERVE'S FIRST MONETARY POLICY REPORT FOR 1989

TUESDAY, FEBRUARY 21, 1989

U.S. SENATE,
COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS,
Washington, DC.

The committee met at 10 a.m. in room SD–538, Dirksen Senate Office Building, Senator Donald W. Riegle (chairman of the committee) presiding.

Present: Senators Riegle, Graham, Wirth, Heinz, D'Amato, Gramm, Mack, Kassebaum, and Pressler.

OPENING STATEMENT OF CHAIRMAN RIEGLE

The CHAIRMAN. The committee will come to order.

Let me invite those who are in the room to find seats as best they can.

Let me just say at the outset that we have a number of committee hearings that are on this morning at precisely this hour. We have Budget Director Darman up one floor in this building testifying before the Budget Committee. There are several members of this committee, including myself and others who are here today, on the Budget Committee.

So there necessarily will be members coming and going, attending different hearings.

The Intelligence Committee and the Appropriations Committee are meeting at this hour, and several others as well in the course of the morning, and we will accommodate members as best we can.

I know, Senator D'Amato, you need to leave, I think, quite quickly, and so I am going to just make a brief opening comment. Then I will yield to you so that you can make your comment and then excuse yourself.

Let me start by welcoming the Chairman of the Federal Reserve, Alan Greenspan, before us this morning. This is the first of two appearances that you will make before this committee this week. You will be back 2 days from now to discuss in detail your thoughts on the FSLIC savings and loan issue, and we very much look forward to that discussion and your input will be very important to us.

For the most part, I think we ought to leave that issue aside today. There may be some questions that arise about how interest rates and monetary policy may affect the savings and loan issue. I think that is an appropriate question if somebody wants to raise it, but generally I would hope that we could set aside a discussion of

the savings and loan FSLIC issue in any detail until you return and we can get into it at that time.

Our topic today, of course, is monetary policy. I want to say at the outset, Chairman Greenspan, that I appreciate the leadership that you have shown at the Fed in your time there. Certainly the turbulent period surrounding the market break back in 1987 was a severe test of the system and all the key players, and I think your leadership during that time was a very important, positive element that helped us work through that period.

I appreciate that leadership, and I believe my view is quite widely shared on this committee and through the Senate as a whole.

That particular crisis is now nearly a year and a half behind us, and other economic problems are of more immediate concern. The business cycle is certainly mature at this point. We have entered the seventh year of expansion, and I think it has become harder to steer a prudent course between inflation on the one hand and a recession or slowdown on the other. The Federal budget deficits and the trade deficit continue to trouble the economy and create problems for us. Obviously, there are some very difficult judgments to make.

It seems to me that the Fed at the present time is facing a rather classic policy conflict. On the one hand, there are those who argue for tighter money to avoid an outbreak of inflation and to preserve the value of financial assets. On the other hand, there are those who argue for easier money and lower interest rates in an effort to stimulate growth and to try to increase tax receipts without raising tax rates.

I am struck by the fact—and I will ask you about this later if you don't choose to comment on it directly that your own economic growth and interest rate forecasts are different than those that are in the Bush administration budget proposals.

Those are significant matters because depending upon which set of estimates are right, obviously, we face a very different set of effects and policy outcomes, and so I think we have to discuss today precisely what the Fed targets are based on and why you see them the way you do.

For example, with respect to growth forecasts, the administration is forecasting 3.3 percent in 1989 and 3.2 percent in 1990, and with respect to interest rates the administration is projecting right now in the first quarter of 1989, 90-day Treasury bills at 8.3 percent, second quarter dropping to 7.8 percent, then dropping to 7.2 percent, in the fourth quarter dropping to 6.6 percent. The average for 1989 being at 7.4 percent, the average for 1990, next year, being 5.5 percent.

That is a pretty remarkable drop in interest rates. It would be nice if that occurs, but I would be very interested in seeing how you and your colleagues within the Fed forecast the interest rate pattern over that same period of time.

In a moment we will get into discussion of your outlook for growth, employment, exchange rates, the trade deficit, and inflation. We want, in addition, your assessment of the health of the economy, to hear not only the good news but also where you think the risks lie and the steps you think we need to take.

I want to just make one other point before yielding to Senator D'Amato, and that is this. I have the strong view as the new chairman of this committee that this committee ought to act, as should the Congress as a whole when revisions are needed in banking laws and the financial structure laws of the country. It will be the intent of this committee to do that, to act and to act promptly and decisively.

We have got a savings and loan problem in front of us that is an immediate problem that has to be dealt with, but it would be my expectation that we will move on into other areas that need attention and act on those, and I would hope that the Fed would not feel that it has to step into the vacuum because of an absence of congressional action.

I would hope that we would be able to move affirmatively within the Congress, and I think that is the way it should be done. I think we will all be more comfortable with that, and so I hope that we can follow through in that fashion.

With that, let me now yield to Senator D'Amato.

OPENING REMARKS OF SENATOR D'AMATO

Senator D'AMATO. Thank you, Mr. Chairman.

Mr. Chairman, in the interest of time—and I do have two other committee hearings—I am going to ask that my statement be included in the record as if read in its entirety.

I would take a moment to observe that notwithstanding the doom prognosticators—and we do have those—that the old quote from Mark Twain I think applies to our current U.S. economy. "Rumors of its demise are greatly exaggerated."

And with that, Mr. Chairman, let me congratulate you for holding this hearing and also welcome Chairman Greenspan, who is doing an outstanding job.

The CHAIRMAN. Thank you very much, Senator. We will make your statement a part of the record.

OPENING STATEMENT OF SENATOR D'AMATO

Senator D'AMATO. I welcome Chairman Greenspan and take this opportunity to observe that another 6 months of sustained economic growth has passed since the last Fed report on monetary policy. The last time we convened here there was again talk of the impending recession. In fact, for a few years now, the doomsayers have been predicting an end to good economic times and many economists are still predicting a recession in the next 2 years. Notwithstanding the many problems that we face today, the old quote from Mark Twain applies to the current U.S. economy: rumors of its demise are greatly exaggerated.

I realize that the Fed is ever vigilant against inflation and that this is a proper concern. Therefore, I commend the Fed for its efforts toward adjusting economic growth as the economy shows signs of reaching full employment and maximum industrial utilization. I also note the Fed's apparent success in establishing a monetary policy that has slowed growth without choking off the robust economy which has created jobs and increases opportunity for all

Americans. We cannot overstate the significance of this current economic expansion.

In the past 8 years, 19 million new jobs have been created, a 17 percent increase in civilian employment. Furthermore, this expansion has been felt in the communities in which increased job opportunity is so much a part of the American dream: employment among blacks has grown by 30 percent and Hispanic employment has grown by 45 percent during the sustained period of growth in the 1980's.

The strong economy of the past 7 years shows that the business cycle does not need to swing widely from periods of growth to periods of recession; that is, there is no strict rule that says that recession is the inevitable conclusion of a period of economic growth. It appears that the Fed, and the American free market, are proving that the economy can be managed at a state of high capacity without bringing on dangerous levels of inflation.

In short, I see no need to accept the inevitability of a recession if we allow the marketplace and wise government policy to work together in taming the business cycle. Therefore, I commend Chairman Greenspan and the Fed for their commitment to fighting inflation. I also encourage your continued sensitive use of the tools at your disposal so that the U.S. economy can continue to provide genuine opportunity and the hope of prosperity to every American.

Thank you, Mr. Chairman.

The CHAIRMAN. Senator Kassebaum.

Senator KASSEBAUM. I have no opening statement, Mr. Chairman. I welcome Chairman Greenspan as well.

The CHAIRMAN. Senator Gramm.

OPENING STATEMENT OF SENATOR GRAMM

Senator GRAMM. Thank you, Mr. Chairman.

Chairman Greenspan, I welcome you back before the committee. I thank you for all of your good work.

Mr. Chairman, I think one of the things we have to look at in terms of assessing the various projections that are made of the future is what those projections are based on.

One of the things that I will be questioning Chairman Greenspan about later today really comes down to that.

Are the assumptions made by CBO and OMB realistic if you assume, as they do, that the deficit will be reduced by $55 billion? That would mean that $55 billion less would be absorbed by the Government out of the private sector, if we meet the Gramm-Rudman targets, meaning that money could go into the private sector to build new homes, new farms, new factories, and generate new economic growth. Are the assumptions of the two budget projections realistic if you assume that the outcome of the budget debate will be such a reduction in the deficit?

Second, I will be asking the Chairman, specifically does it make a difference from your point of view in terms of trying to promote economic growth, trying to control price increases so that we don't repeat a cycle that we paid such a high price to break, does it make a difference whether we deal with the deficit by raising taxes or by controlling spending?

Are the two approaches to deficit reduction created equally in terms of their economic impact, or is one superior to the other from the point of view of the economic impact in trying to create growth without inflation?

I think those are the questions that we have to deal with here, and, Mr. Chairman, I look forward to participating in the hearing. Like you, I have got to run upstairs to the Budget Committee. Thank goodness we are here doing all this important work lest it might not get done.

The CHAIRMAN. Well, try not to be gone too long.

Senator Heinz.

OPENING STATEMENT OF SENATOR HEINZ

Senator HEINZ. Mr. Chairman, I simply want to join in welcoming Alan Greenspan back to this committee and to commend him for the usual excellent job he has done.

One of the questions that I will want Chairman Greenspan to address is the question not only as posed by Phil Gramm about the effect of lowering the budget deficit and how it will help make the economic assumptions or projections in the President's budget come true, but also how those projections can come true unless we address the issues that affect real growth in the U.S. economy.

I refer to labor productivity, the competence and technological ability of management and, most importantly, the cost of capital as it affects production of products in this country.

It seems to me that we really need to focus on the three main inputs that drive real productivity. Some of them are very hard to influence. Labor productivity is influenced by educational levels and, I suppose, by incentives or morale or motivation. It certainly is true in the Japanese model. The competence or ability of management is pretty hard to influence in the short term. I will be interested in Chairman Greenspan's comments about what we can do in improving the access to, and lowering of, the cost of capital as an important element in the equation.

The CHAIRMAN. Thank you very much, Senator Heinz.

Before we hear from Chairman Greenspan, I have a statement from Senator Sasser to be inserted in the record.

STATEMENT OF SENATOR JIM SASSER

Senator SASSER. Mr. Chairman, today we hear from the distinguished chairman of the Federal Reserve on the conduct of monetary policy—a critical issue at this time.

Interest rates are rising and this does not bode well for the economy. Every percentage point increase in interest rates will add $11 billion to the deficit. Moreover, a dampening of the economy, that will surely follow higher rates, could make the deficit virtually impossible to deal with.

We need to closely examine our interest rate policy. Short term interest rates have increased by 2.5 percentage points—or 50 percent—since June of 1988.

We know that there are basically two factors that can influence interest rates like this: Inflationary expectations of investors or monetary policy.

However, surveys of expectations of investors indicate that most investors believe that inflation will increase only modestly in the months ahead. There is little upward pressure on rates from the markets themselves.

Hence, it appears that a very restrictive monetary policy is the driving force behind the interest rate rise.

We know what has happened in the past when the fed has been overly restrictive. So we want to hear the Fed's evidence on inflation as well as their projections as to where the economy is going.

Most of all, we want to know if the economy can grow at a rate that will fulfill the assumptions in the President's budget. Thank you, Mr. Chairman.

The CHAIRMAN. Let me now just indicate that the monetary policy report that you are submitting this morning, Dr. Greenspan, is required by law under the Full Employment and Balanced Growth Act of 1978.

This is a very important transmittal document, and we will make the full document a part of the record.

[The complete document follows:]

Insert T.1

For use at 10:00 a.m., E.S.T.
Tuesday
February 21, 1989

Board of Governors of the Federal Reserve System

Monetary Policy Report to Congress Pursuant to the Full Employment and Balanced Growth Act of 1978

February 21, 1989

Letter of Transmittal

BOARD OF GOVERNORS OF THE
FEDERAL RESERVE SYSTEM
Washington, D.C., February 21, 1989

THE PRESIDENT OF THE SENATE
THE SPEAKER OF THE HOUSE OF REPRESENTATIVES.

The Board of Governors is pleased to submit its Monetary Policy Report to the Congress pursuant to the Full Employment and Balanced Growth Act of 1978.

Sincerely,
Alan Greenspan, Chairman

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Section 1: Monetary Policy and the Economic Outlook for 1989

Overall, 1988 was another year of progress for the U.S. economy, marked by further substantial increases in output and employment and by a significant improvement in the balance of trade. The dramatic stock market break of October 1987 did seem to affect real activity for a time, but the underlying strength of the economy soon showed through, and, apart from losses of farm output caused by the drought, growth proceeded at a relatively strong pace throughout 1988. Moreover, the sizable employment gains in January of this year suggest that the economy entered 1989 with considerable forward momentum.

Inflation has remained in check into the seventh year of the expansion. Even so, developments during 1988 were a little worrying, as, for a second year, increases in prices were somewhat larger than in earlier years of the expansion. Part of the pressure on prices in 1988 came in the food area and reflected the influence of the drought. However, with labor markets tightening, there also was a quickening in the rise of wages and total hourly compensation, which affected prices more generally.

Federal Reserve policy mirrored the changing economic circumstances of 1988. Early in the year, as in late 1987, the Federal Reserve sought to limit repercussions from the plunge in stock prices and, in particular, to guard against the possibility of a significant contraction in business activity. Pressures on the reserve positions of depository institutions were eased a bit further in early 1988, and interest rates edged down for a time, extending the declines that had begun in October of 1987. Growth of M2 and M3 was fairly rapid during this period, nearly reaching the upper bounds of the annual target ranges established by the Federal Open Market Committee (FOMC).

As it became clear in the spring that the economy still was strong, the focus of Federal Reserve policy shifted. For much of the year, there was heightened concern about the potential for increased inflation, largely reflecting rapid growth of spending and a continued tightening of labor and product markets. A sharp upswing in real net exports of goods and services that had begun in 1987 continued into 1988, and while this upturn was a welcome and necessary part of the adjustment of the U.S. economy toward a better balance in its external accounts, it also intensified the demands on U.S. producers at a time when the utilization of domestic labor and capital already was quite high. Accommodating the improvement in our external position while limiting the risk of heightened inflation required restraint on the growth of domestic demand.

The shift by the Federal Reserve toward restraint was reflected in a tightening of the reserve market conditions that began in late March and continued, in several steps, into 1989. Short-term market interest rates moved up during this period, influenced both by the System's tightening and the strength of the economy, and the discount rate was raised in August, to its current level of 6½ percent. Growth of M2 moderated after the spring and ended the year just below the middle of the 1988 target range. The growth of M3 also ebbed over the last two quarters, as the needs of banks and thrifts to fund credit expansion slackened.

At present, short-term interest rates are about 2½ percentage points higher than they were early last spring. Long-term interest rates, by contrast, have changed little, on net, over that same period; although these rates turned up in the spring of 1988, they leveled off over the summer and edged down in the fall, even as short-term rates were continuing to rise. This behavior of bond yields seems to have reflected a lowering of market expectations of long-run inflation.

Monetary Policy for 1989

The commitment by the Federal Reserve to contain inflationary pressures is reflected in the FOMC's decisions to lower the ranges for monetary and credit expansion this year. The Committee has set a range of 3 to 7 percent for M2 growth during 1989 and a range of 3½ to 7½ percent for M3, reaffirming the target ranges established tentatively in June 1988. These ranges were reduced from those for 1988—a full percentage point for M2 and one-half percentage point for M3—signalling the Committee's determination to resist any upward tendencies in inflation in the coming year and to promote progress toward price stability over the long run. The monitoring range for growth of domestic nonfinancial debt for 1989 was set at 6½ to 10½ percent, which also is lower than that of last year.

In recognition of the degree to which the relationship between monetary aggregates and economic performance has varied in this decade, the Committee retained the four percentage point spread between the upper and lower ends of the growth ranges that it adopted in 1988. Despite the deregulation of deposit interest rates, M2 velocity has remained very sensitive to changes in market interest rates over periods as long as a year or more. Depository institutions have been

Ranges of Growth for Monetary and Credit Aggregates

Percent change, fourth quarter to fourth quarter	1987	1988	1989
M2	5½ to 8½	4 to 8	3 to 7
M3	5½ to 8½	4 to 8	3½ to 7½
Debt	8 to 11	7 to 11	6½ to 10½

slow to adjust some of their offering rates, causing substantial changes over the short- and intermediate-term in the relative attractiveness to savers of deposits versus market instruments. In these circumstances, it is difficult to specify in advance a narrow range for the appropriate growth of M2 and the other aggregates in the coming year; such growth will depend on the forces affecting the economy and prices and on the response of depository institutions to any changes in market interest rates, both of which are subject to a substantial degree of uncertainty. Moreover, in 1989, the behavior of M2 and M3 also could be influenced by the resolution of problems in the thrift industry, depending, in part, on how pricing practices of these institutions change, on the reactions of retail and wholesale depositors in these institutions, and on the extent of any restraints on the growth of assets of savings and loan associations.

M2 and M3 are now around the lower ends of their 1989 ranges. This slow growth and the accompanying rise in velocity reflect the continuing effects of recent increases in market interest rates. In light of the slow adjustment of deposit rates, velocity could continue to increase, with growth in these monetary aggregates in the lower halves of their ranges. Given the uncertainties about the relation of movements in the aggregates to prices and output, the Committee agreed that in implementing policy, they would need to assess, in addition to the behavior of money, indicators of inflationary pressures and economic growth, as well as developments in financial and foreign exchange markets.

The Committee will continue to monitor the growth of domestic debt in 1989. The expansion of debt of nonfinancial sectors may slow a little from the 8¾ percent pace of 1988, although it is expected once again to exceed the pace of growth in nominal income. The growth of debt could be importantly affected by corporate financial behavior. The expansion of private debt has been boosted in recent years by the substitution of debt for equity in connection with leveraged buyouts and other corporate restructurings, and business borrowing is likely to be especially sizable in the early part of this year, owing to the recent heavy volume of such activity. The federal government, once again, will be placing heavy demands on credit markets, financing its continuing deficit.

Economic Projections

In general, the Committee members, including the nonvoting Reserve Bank presidents, anticipate that real GNP will grow moderately in 1989, that prices will rise at a pace similar to, or perhaps slightly above, that of 1988, and that the unemployment rate will remain near its recent level – the lowest in a decade and a half. On balance, the FOMC members anticipate a little less real growth and a somewhat higher rate of inflation than does the Administration, but the differences are not large.

Members of the Committee believe that the progress of the economy in 1989 will be determined in large measure by developments on the inflation front. Although special factors, such as the drought, contributed to price increases last year, there also have been troubling indications – most notably in recent wage trends – that inflationary pressures have become more widespread and, potentially, more deeply rooted.

Given the tightening actions taken by the Federal Reserve over the past year and the policy of continued restraint on aggregate demand expressed in the monetary targets for 1989, the members of the Committee anticipate that, if there is any further acceleration of prices from the 1988 pace, it will be quite limited. The majority of the Committee members expect that the consumer price index will rise about 4½ to 5 percent this year. This would be a slightly larger increase than in 1988, and thus would represent something of a setback relative to the Committee's disinflationary objective. However, in light of the tautness of markets and the current momentum of wages and prices, these members viewed such a projection as realistic in the

Economic Projections for 1989

	1988 Actual	FOMC Members and Other FRB Presidents	
		Range	Central Tendency
Percent change, fourth quarter to fourth quarter			
Nominal GNP	7.0	5½ to 8½	6½ to 7½
Real GNP	2.7	1½ to 3¼	2½ to 3
Consumer price index	4.3	3½ to 5½	4½ to 5
Average level in the fourth quarter, percent			
Unemployment rate	5.3	5 to 6	5¼ to 5½

context of a prudent effort to restore price stability over time. It should be noted, however, that some members expect a rise in prices that is significantly below the central-tendency range; in their view this far more desirable outcome could flow from the dollar's recent firmness, which will damp the pressures from rising import prices, and from the recognition by business and labor that restraint is needed to preserve gains in international competitiveness.

A particular uncertainty in the inflation outlook for 1989 centers on the prospects for food prices. FOMC members generally assumed that a return to more normal weather conditions this year, together with an increase in acres planted, would lead to a sharp rebound in crop production, in which case food prices might help to temper overall inflation. However, because stocks of some key agricultural commodities have been reduced to low levels, there also is risk that another year of drought could generate strong upward pressures on prices. In the energy area, consumer prices could rise sharply early this year, responding to the runup in oil prices around the end of 1988; nonetheless, world oil supplies still look ample, and members of the Committee are assuming that energy prices will increase only moderately over 1989 as a whole.

With respect to real GNP, the central tendency forecast of the Committee members is for a rise of about 2½ to 3 percent in 1989, about the same as in 1988. However, this forecast incorporates a working assumption that increased farm output will add around two-thirds of a percentage point to the growth of GNP—similar to the amount that the drought pared from 1988's growth. Excluding this swing in farm output, the central-tendency forecast is for considerably slower growth of real output than last year's gain, excluding drought losses, of more than 3 percent.

Although the economy clearly has entered 1989 on a strong note—even discounting the transitory influence of unusually mild weather in many parts of the country—the members feel that growth soon will move to a lower trajectory, owing both to the general influence of monetary restraint and to a number of sector-specific trends. In the business sector, the boom in capital outlays that was evident in the first half of 1988 has since abated, and surveys of plans for 1989 point to moderate gains in overall plant and equipment spending. Government purchases are expected to be held down by budgetary constraints; defense purchases, in particular, have been trending lower under the influence of cutbacks in real spending authority. Recent increases in mortgage rates likely portend some slackening in the pace of homebuilding, and the growth of consumption expenditures also should begin to taper off from the rapid pace of 1988, as a slowing of expansion elsewhere in the economy damps the growth of real disposable income.

With regard to the external sector, real net exports of goods and services declined over the second half of 1988, but most members of the Committee expect some improvement in the months ahead. However, substantial further progress in external adjustment will require a continuing commitment on the part of U.S. firms to capitalize on the enhanced competitiveness resulting from the depreciation of the dollar since 1985. That commitment must take the form not only of continued cost control and price restraint, but also of

more intense efforts at marketing abroad and investment in new capacity where constraints are visible. Failure on these counts would almost certainly leave the U.S. economy considerably less well off over the long haul.

Government policy can do much to encourage businesses to make the longer-range commitments needed to bring about better balance in the economy and to foster longer-run growth. A monetary policy directed steadfastly at movement toward price stability is one critical ingredient. But also crucial is action to bring about further progress toward balance in the federal budget. The Committee has assumed that Gramm–Rudman–Hollings targets will be adhered to in the fiscal 1990 budget process, but the creation of an environment favorable for economic growth with stable prices requires that fiscal policies be put in place to produce the prescribed budget results in the out-years as well.

Section 2: The Performance of the Economy In 1988

The U.S. economy completed a sixth year of expansion in 1988. Real GNP rose about 2¾ percent over the course of the year, the number of jobs increased more than 3½ million, and the unemployment rate remained on a downward course, closing the year at 5.3 percent, its lowest level in 14 years. Progress also was made toward restoring external balance, as the merchandise trade deficit fell sharply.

The year began on a note of uncertainty. The sharp break in the stock market in the fall of 1987 had raised concern that the economy might falter, and some signs of weakness did emerge around the start of 1988. By early spring, however, it became clear that the expansion still had considerable vigor, coming in particular from rising exports and a boom in capital spending. Households, meanwhile, adjusted fairly readily to the loss of stock market wealth, and consumer spending rose at a strong pace throughout the year. Toward the end of the year, net exports and capital spending softened, but there was enough impetus from other sectors to keep real GNP on a firm upward course.

The rate of inflation, which had picked up in 1987, remained somewhat higher in 1988 than in earlier years. The step-up in inflation in 1987 had resulted mainly from a rebound in the price of oil and the passthrough of higher prices for imports. This past year, by contrast, extra price pressures reflected the impact of drought on the price of food and, more generally, a widespread pickup in labor costs in the domestic economy.

The rise in real GNP last year would have exceeded 3 percent, but for a severe drought—one of the worst of this century—that caused huge losses of farm output. These losses accounted for most of the slowdown in GNP growth that occurred after the first quarter of 1988. Fortunately, inventories of farm products had been sizable coming into 1988, and a drawdown of stocks helped to buffer households and others from the disruption to output. Within the farm sector, the drought strained the finances of some producers, but the financial condition of many others was not seriously affected, and the sector as a whole remains stronger fundamentally than in the first half of the 1980s, when the boom of the previous decade was unwinding.

In most of the nonfarm economy, the growth of activity was robust in 1988. Production in the manufacturing sector increased 5 percent, nearly matching the previous year's gain, and factory employment rose sharply. Employment also continued to grow rapidly in retail and wholesale trade and among the providers of business and health services. However, oil drilling, which had turned up in 1987 when oil prices were rising, experienced renewed weakness in 1988, intensifying economic stresses in some parts of the country.

The External Sector

The U.S. external accounts showed considerable improvement during 1988. On a balance of payments basis, the deficit on merchandise trade fell from an annual rate of $165 billion in the fourth quarter of 1987 to around $120 billion in the second quarter of 1988 and, on average, remained at that lower level in the second half of the year. Over the four quarters of last year, the value of exports rose more than 20 percent; adjusted for inflation, the increase was around 15 percent. Much of the strength in exports, which was concentrated in the first half of the year, appeared to be associated with an improvement in the price competitiveness of U.S. products, resulting from an earlier depreciation of the dollar, as well as with efforts at cost control and increases in productivity among domestic producers. Demand for exports also was supported by surprisingly strong economic growth in other industrial countries. The growth in real export volume was spread over most categories of trade; gains were particularly large for capital goods (especially computers and computer parts), automotive products, and consumer goods. The volume of agricultural exports for 1988 was up 9 percent from that of 1987, despite declines in the second half of the year; the value of these exports was boosted further by the drought-induced rise in crop prices.

The value of merchandise imports, other than oil, rose about 7 percent during 1988. The volume of non-oil imports increased about 2 percent. This rise was concentrated mainly in the capital goods area; volume was down for other major categories of imports. The prices of imported industrial supplies (excluding oil) rose significantly in 1988; smaller increases were recorded for consumer goods, automotive products, and various machinery categories. However, price declines for oil and computers held the overall increase in import prices below that of 1987; on a fixed-weight basis, the rise in non-oil import prices during 1988 was 7¼ percent. The value of oil imports declined last year, as an increase in physical volume was more than offset by the decline in price.

For the first three quarters of 1988, the current account showed a cumulative deficit of $102 billion,

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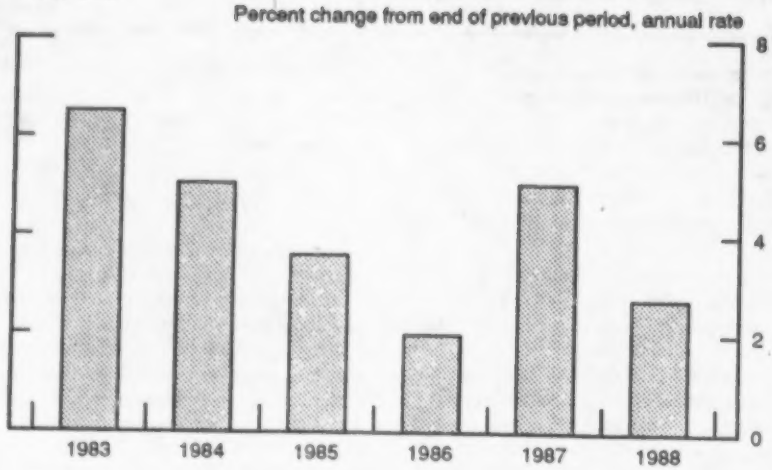
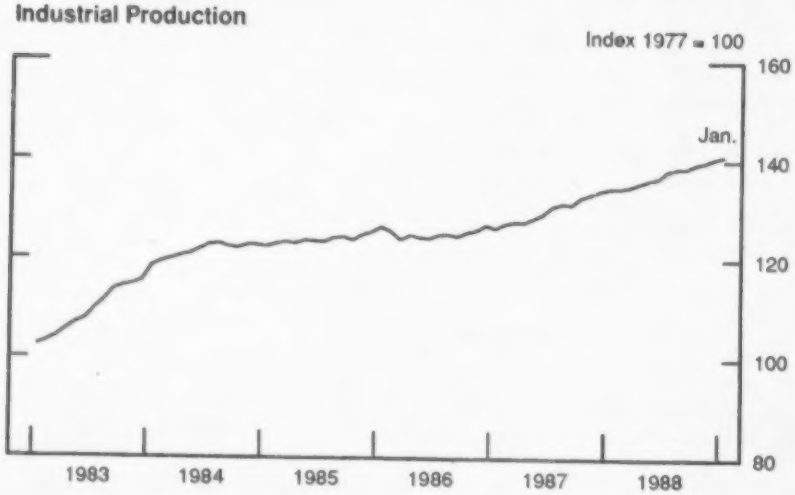
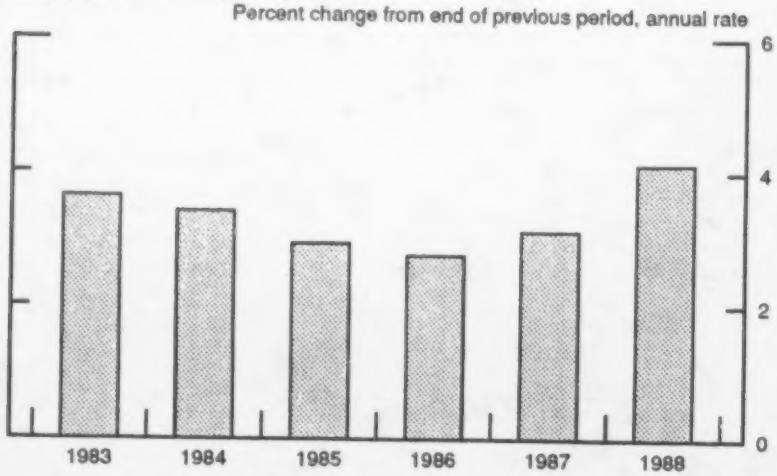
Real GNP



Industrial Production

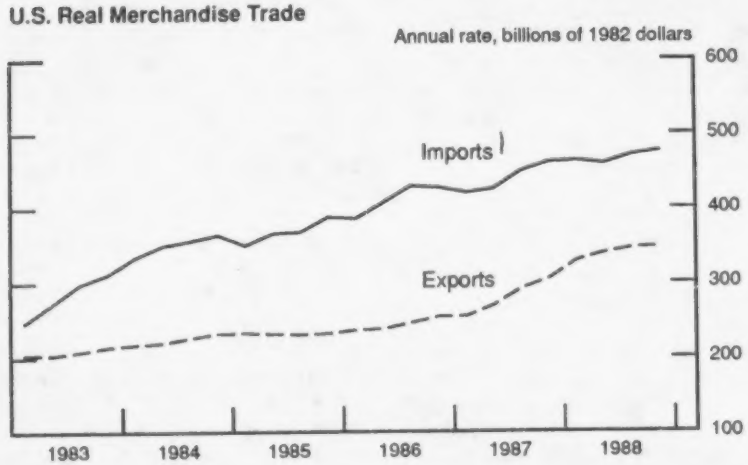


Implicit Price Deflator for GNP

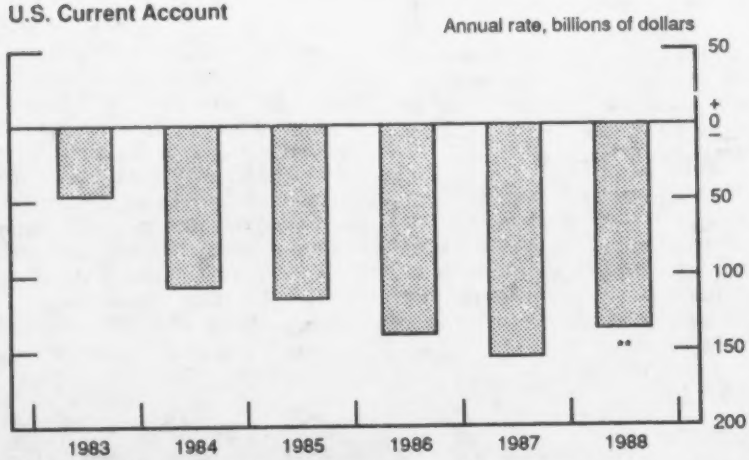


Foreign Exchange Value of the U.S. Dollar *

U.S. Real Merchandise Trade



U.S. Current Account



* Index of weighted average foreign exchange value of U.S. dollar in terms of currencies of other G-10 countries plus Switzerland. Weights are 1972-76 global trade of each of the 10 countries.

** Average of first three quarters of 1988, at an annual rate.

which was balanced by recorded net capital inflows of $88 billion and a statistical discrepancy of $14 billion. Foreign official assets in the United States increased $28 billion on net (this rise included about $30 billion, on net, of official purchases of U.S. government securities). Net inflows through banks were $21 billion. Excluding banking flows, assets held in the United States by private foreigners increased $68 billion on net; purchases of U.S. government securities were sizable (in contrast to net sales in 1987), and direct investment by foreigners in the United States remained near record levels. Excluding bank flows, the assets held abroad by private U.S. residents increased $26 billion. These recorded capital flows during the first three quarters of 1988, plus the likely net inflows in the fourth quarter, brought the recorded U.S. net indebtedness to foreigners to almost $500 billion at the end of 1988.

The foreign exchange value of the U.S. dollar, which had fallen sharply from early 1985 through the end of 1987, has shown wide fluctuations in the subsequent period. Measured against the other G-10 currencies, the dollar currently is up somewhat, on net, from its end-of-1987 low. However, it has declined in real (price-adjusted) terms against the currencies of our major trading partners among the developing countries, especially South Korea, Mexico, and Brazil.

From mid-April to late August of last year, the dollar rose sharply, on average, against the currencies of the other industrial countries, reflecting the influences of Federal Reserve monetary tightening and monthly trade reports that brightened the market's assessment of the outlook for U.S. external adjustment. When measured against a weighted average of the other G-10 currencies, the appreciation during that period was more than 15 percent. After holding steady through September, the dollar then declined sharply in October and November; market perceptions appeared to shift during that period toward a view that monetary restraint in other countries had increased relative to that in the United States, and incoming trade data suggested a stalling of the adjustment process. Since November, the dollar has again risen, partly in response to further tightening actions by the Federal Reserve.

Measured against the G-10 currencies, the dollar currently is about 7 percent above its December 1987 level. If adjustment is made for changes in relative prices, the resulting real appreciation is somewhat greater, as inflation in the United States has exceeded the weighted average of inflation rates of the other major industrial countries.

The Household Sector

At the start of 1988, concern about the possible effect of the stock market break on the real economy centered on the household sector. The drop in share values had pared roughly half a trillion dollars from household wealth, and the degree to which spending would be cut in response to this loss of wealth was not clear.

In the event, the loss of wealth may indeed have left an imprint on consumer demand. The personal saving rate did rise after the crash and, over the next year, averaged about a percentage point higher than in the year preceding the crash. But, with exports and capital investment booming, the growth of jobs and real incomes remained strong in 1988, and the uncertainties spawned by the crash soon gave way to renewed optimism among households. Thus, after the initial, one-time jump in the saving rate, real consumption expenditures grew at about the same pace as the trend in after-tax income; the rise over the year was about 3½ percent.

Consumer spending for big-ticket items was brisk in 1988. The unit sales of domestically produced automobiles moved up a bit from the 1987 pace, and the sales of light trucks and vans, which have more than doubled since the expansion began in 1983, reached another new high. Adjusted for inflation, total consumer spending for motor vehicles increased 6½ percent over the four quarters of the year. Among the household durables, real outlays for furniture and appliances, which had slowed in 1987, moved up 7½ percent during 1988, renewing the strength that had been evident over the 1983–86 period.

Real residential investment fell slightly in the first half of 1988, but turned up in the second half and, by the fourth quarter, was a little above the level of a year earlier. Starts of multifamily housing units, which had slumped in 1987, fell further in the first quarter of 1988, but then flattened out over the remainder of the year; vacancy rates for multifamily dwellings remain high in many areas and are likely to hold down new construction of these units for some time. In the single-family sector, starts edged down through the first three quarters of 1988, but rebounded toward year-end to the highest levels since the fall of 1987. By historical standards, these swings in single-family starts during 1988 were relatively mild; indeed, from a longer-term perspective, the past six years have been an unusually stable period in the single-family market, in sharp contrast to the boom and bust cycles of the 1970s and early 1980s. Total housing starts, of course, have fallen sharply since 1986 because of the steep decline in construction of multifamily units.

The Business Sector

Virtually all indicators of business activity exhibited strength in 1988. Business sales, in nominal terms, rose 9 percent over the year. Hiring was brisk in most sectors, and operating rates rose further; in the industrial sector, capacity utilization at the end of 1988 was at its highest level since 1979. Corporate profits remained healthy.

A surge in business equipment spending that had begun in 1987 extended through the first half of 1988, when outlays grew, in real terms, at an annual rate of about 20 percent. The surge was led by sizable investment in high-technology items—computers, communication equipment, and the like—but outlays for other types of equipment also were strong. After midyear, the rise in equipment spending slowed, and some weakness became evident toward the end of the year. However, most reports from the field suggest that the underlying trend in equipment spending still is pointing firmly upward.

Business spending for new construction declined in 1988, reversing the moderate increase of the previous year. Commercial construction, the biggest item in the total, continued to be restrained in 1988 by the big overhang of vacancies that grew out of the building boom of the mid-1980s. Gas and oil drilling, following the lead of oil prices, fell back a little from the pace of late 1987, but remained above the lows of 1986. Construction of buildings for industrial use was little changed over 1988; although capacity utilization is high in manufacturing, many producers also appear to be limiting their needs for additional space by shifting toward technologies that use more compact equipment, by economizing on inventories, or by conserving on space in other ways.

Inventory investment, which had been sizable in late 1987, moderated in 1988, and, with sales on an upward trajectory, stock overhangs were not a problem for most businesses. In manufacturing, stocks grew more rapidly in 1988 than they have in recent years, but much of the accumulation was in industries in which orders and shipments also were generally strong; the ratio of inventories to sales for all of manufacturing moved down during the year from the already low levels of late 1987. In retail trade, concern about a possible overhang of the stocks of nondurables eased a bit during the year, as the ratio of stocks to sales in that sector edged gradually lower from a February high. By contrast, auto dealers' stocks rose sharply in the fourth quarter, and auto manufacturers have enhanced sales incentives and moved to a lower assembly rate in an effort to pare inventories. For all of manufacturing and trade combined, the ratio of inventories to sales varied little over the course of 1988 and was near the lower end of the range in which it has been since the business expansion began.

The Government Sector

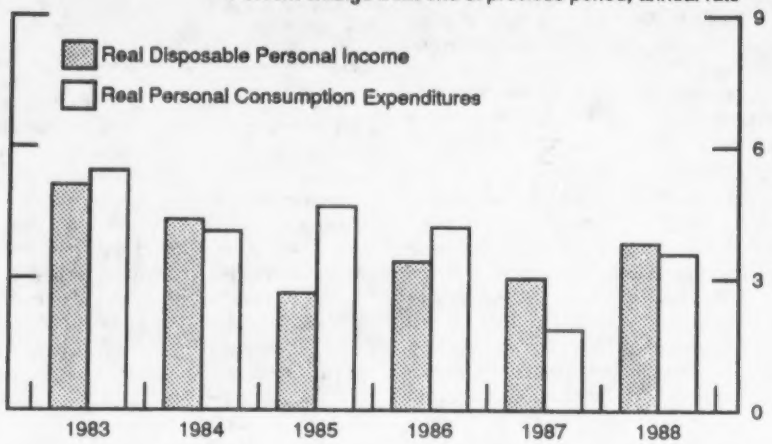
Budgetary constraints have led to a slowing of government purchases, both at the federal level and among state and local governments. The federal government's purchases of goods and services—the part of federal spending that adds directly to the gross national product—fell 4 percent in real terms from the fourth quarter of 1987 to the fourth quarter of 1988. Roughly half of the decline reflected a drought-induced reduction in the farm inventories owned or financed by the Commodity Credit Corporation (CCC), a reduction that is counted as a negative federal purchase. Excluding this inventory swing, federal purchases were down 2 percent over the year—the first decline since 1976. Over the eight years that preceded 1988, real federal purchases, other than those of the CCC, had risen at an average pace of nearly 5 percent, considerably faster than the growth of real GNP. The downturn in 1988 reflected cuts in the defense area; other non-CCC federal purchases rose somewhat over the year.

On a budget basis, total federal outlays, which are almost three times as great as federal purchases alone, continued to rise in fiscal year 1988, but at a somewhat slower rate than in most previous years. There were further increases in entitlements, greater demands on deposit insurance agencies, and increases in net interest payments. Meanwhile, the growth of federal receipts slowed in 1988 from the rapid pace of the previous year. Receipts from social security taxes rose more than 10 percent—owing in part to a rate increase in January of 1988. However, growth in receipts from personal income taxes slowed, as increases in employment and nominal incomes were offset by final reductions in income tax rates legislated under the 1986 tax reforms. The federal budget deficit in fiscal year 1988 was $155 billion, slightly above the level of the previous year.

The real purchases of goods and services by state and local governments rose 3 percent over the four quarters of 1988, a little more than in 1987, but less than the average rate of growth over the preceding three years. Spending for construction, which had risen rapidly in the mid-1980s, was little changed during 1988 as a whole, although some pickup was evident in the fourth quarter. Employment in the state and local sector continued to rise during 1988, reflecting, in part, the increased demands for teachers and other school workers associated with growth in the number of elementary students.

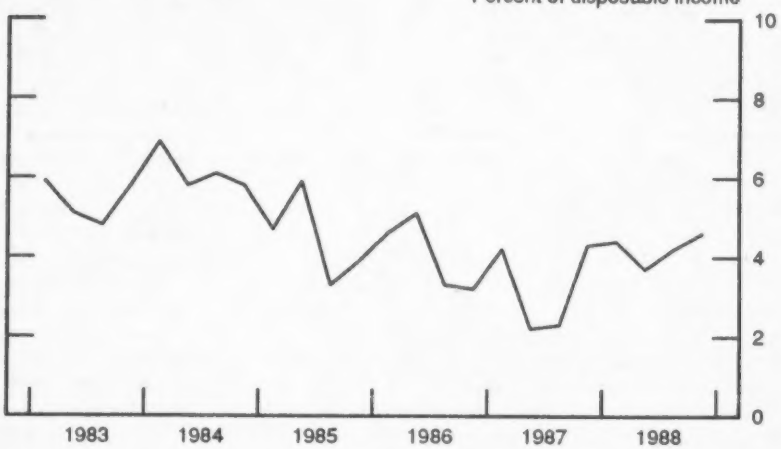
Real Income and Consumption

Percent change from end of previous period, annual rate



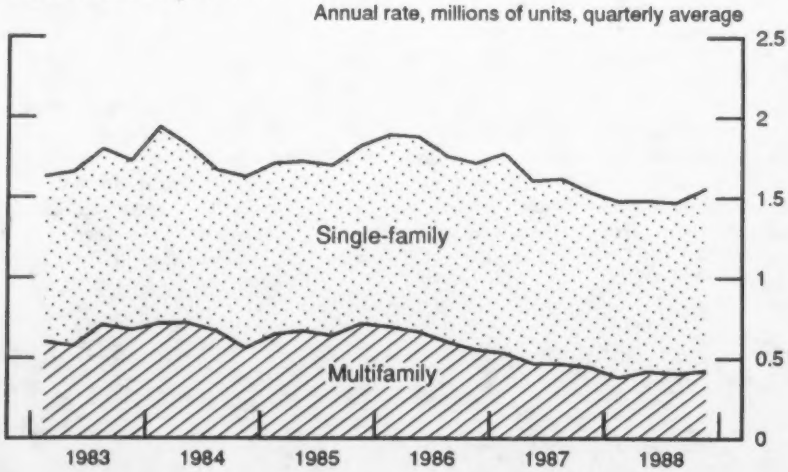
Personal Saving Rate

Percent of disposable income



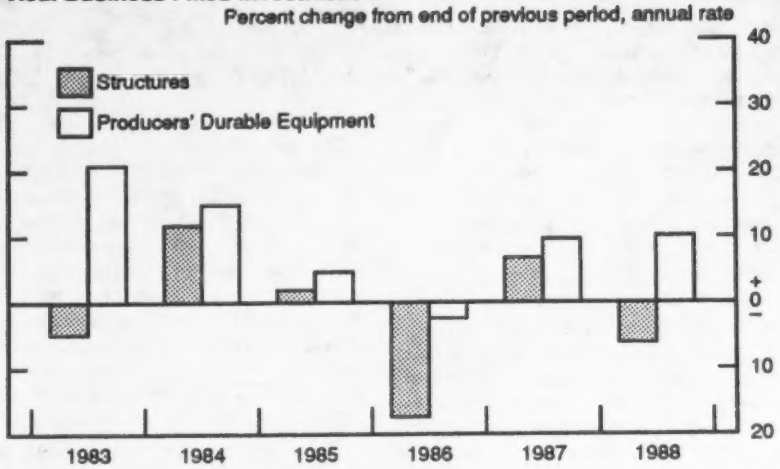
Private Housing Starts

Annual rate, millions of units, quarterly average



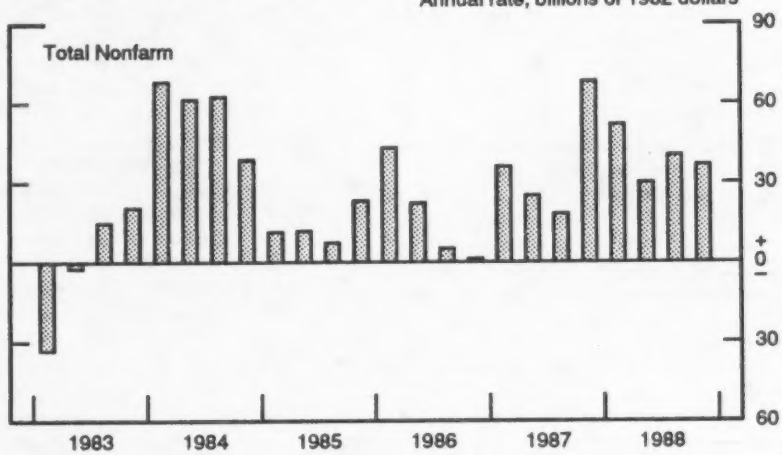
Real Business Fixed Investment

Percent change from end of previous period, annual rate

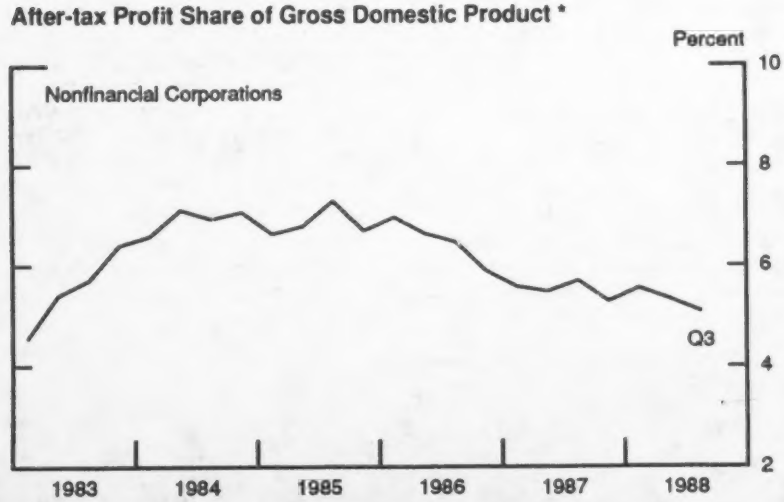


Changes in Real Business Inventories

Annual rate, billions of 1982 dollars



After-tax Profit Share of Gross Domestic Product *



* Ratio of profits from domestic operations with inventory valuation and capital consumption adjustments to gross domestic product of nonfinancial corporate sector.

The Labor Markets

The rise in the number of jobs during 1988 was somewhat above that of 1987 and brought the total increase in payroll employment since late 1982 to about 18½ million. Virtually all parts of the economy shared in last year's gain. The number of jobs in manufacturing increased 400,000; employment in construction was up 300,000. Close to a million new jobs were created in retail and wholesale trade, and 1.3 million were added in services. Except for a brief slowdown in the summer, the growth of jobs was strong throughout the year.

The continued rise in employment last year led to a tightening of labor markets and called attention to limits on the potential growth of the supply of labor and of output. Growth of the working-age population has slowed in the 1980s, and the increase during 1988 was the smallest annual rise in more than two decades. This slowing of popula- tion growth in the 1980s has led, in turn, to a more moderate rate of growth in the labor force, even as the rate of labor force participation, especially for adult women, has continued to rise. A big boost to output during the expansion has come from putting unemployed workers back on the job; now, however, with the unemployment rate at less than 5½ percent, the labor force is more fully utilized than at any time in the last decade and a half.

The tightening of labor markets in 1988 was associated with a pickup in the rise of wages and labor costs. The employment cost index for wages and salaries in the private nonfarm sector increased a bit more than 4 percent over the year—almost a percentage point more than in 1987. The pickup was most pronounced among white collar workers and in the service-producing industries, where unemployment rates currently are the lowest. The cost of benefits provided to employees rose 6¾ percent over the year, nearly twice the increase of 1987; the rise reflected both the hike in the payroll tax at the start of 1988 and a surge in the cost of health benefits. Total compensation per hour—wages and salaries plus benefits—rose nearly 5 percent over the four quarters of 1988, after two years in which the annual increases had been in the neighborhood of 3¼ percent.

Productivity gains slackened somewhat in 1988. The rise in output per hour in the nonfarm business sector over the four quarters of the year was only 0.7 percent—about half a percentage point below the average over this decade. This slippage in productivity growth in 1988, combined with the faster rate of increase in hourly compensation, resulted in a 4 percent rise in unit labor costs in the nonfarm business sector over the four quarters of 1988—well above the average rate of increase during the previous five years.

Price Developments

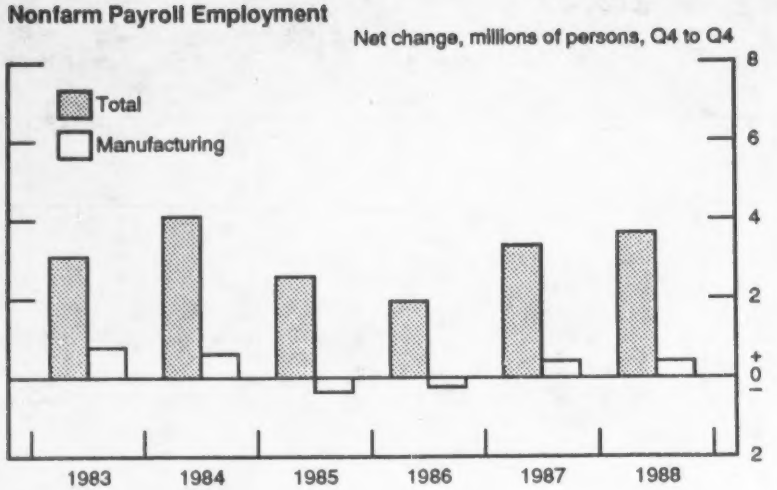
The broader measures of prices—including the GNP price measures, the producer price index, and the consumer price index—all indicate that inflation was in a range of 4 to 4½ percent in 1988. Except for the CPI, which had moved up into this range in 1987, these measures showed some acceleration last year, and all of them—including the CPI—rose more rapidly than in the first four years of the expansion. In contrast to 1987, when the indexes were boosted by a rebound in energy prices and rising prices for imports, the inflationary pressures this past year were augmented by larger increases in labor costs in the U.S. economy and the drought's influence on agricultural prices.

The drought's effects appeared quickly at the retail level in the summer, as price increases picked up for a wide variety of consumer foods. By late autumn, however, the impact of the drought on food prices began to dissipate, and inflation in the food sector returned to a more moderate path. The increase in consumer food prices over the year as a whole was 5¼ percent—about 2 percentage points above the average of the preceding five years. Prices in 1989 will be sensitive to weather developments over the spring and summer. In the past, major droughts in the United States have been one-year events, often separated in time by several good growing seasons, and most agricultural observers have been assuming that farm output will rebound in 1989, thereby restraining the prices of farm crops. Currently, however, dry conditions still prevail in some important growing regions, and crop prices could rise abruptly if moisture supplies are deficient in coming months.

Energy prices were little changed at the consumer level during 1988 after a sharp rise in 1987—a pattern that resulted mainly from the continued gyrations in world oil markets. The price of oil, which had risen sharply in 1987, moved lower for much of 1988, as the efforts of OPEC to restrain production unraveled. In late 1988, a new agreement by OPEC to limit production, coupled with higher-than-expected oil consumption and production shortfalls in non-OPEC countries, caused prices to rise sharply once again; however, despite these fluctuations, prices have not made any sustained departure from the range in which they generally have been since the summer of 1986.

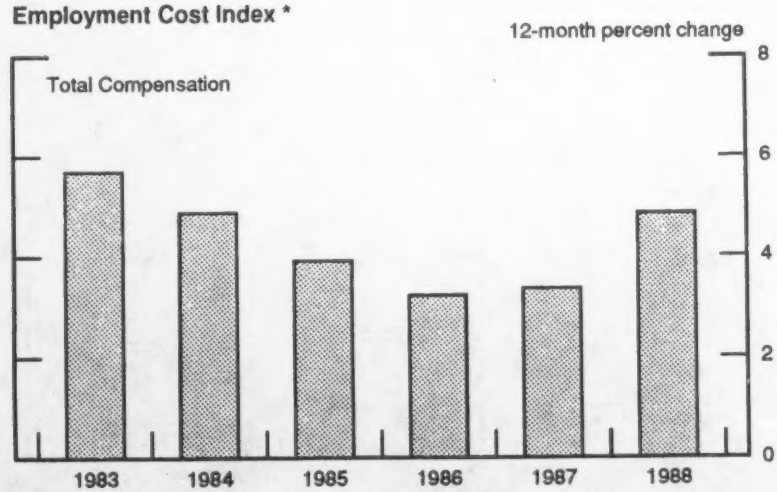
Price increases for goods and services other than food and energy were larger in 1988 than in 1987. The pickup, while fairly moderate, was widespread and

Nonfarm Payroll Employment



Civilian Unemployment Rate

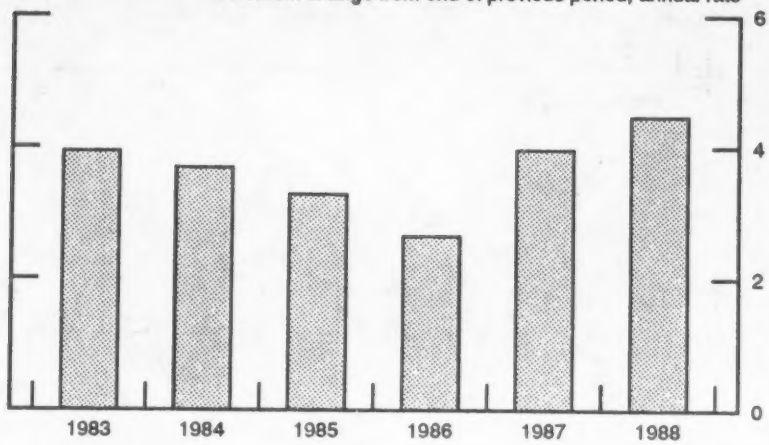
Employment Cost Index *



* Employment cost index for private industry, excluding farm and household workers.

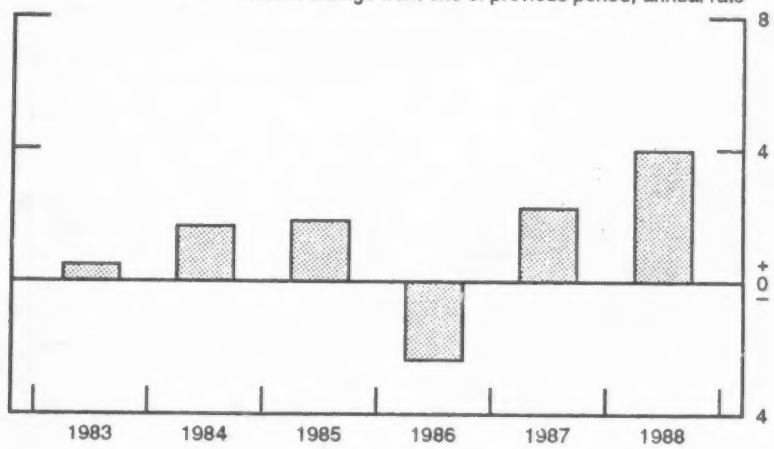
GNP Fixed-weighted Prices

Percent change from end of previous period, annual rate



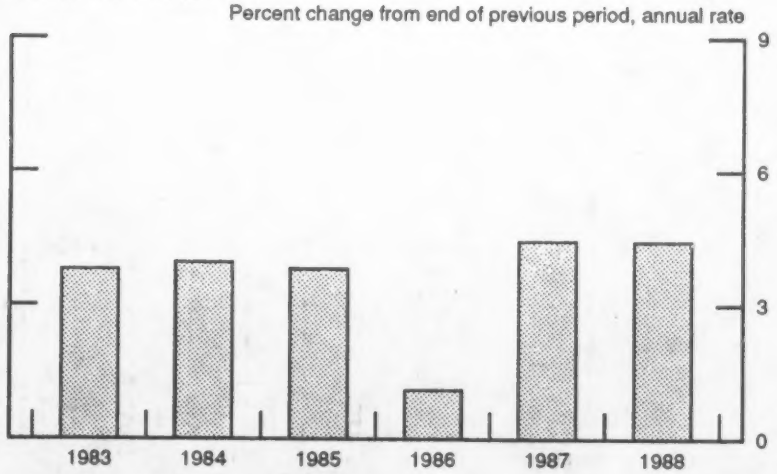
Producer Prices

Percent change from end of previous period, annual rate



Consumer Prices *

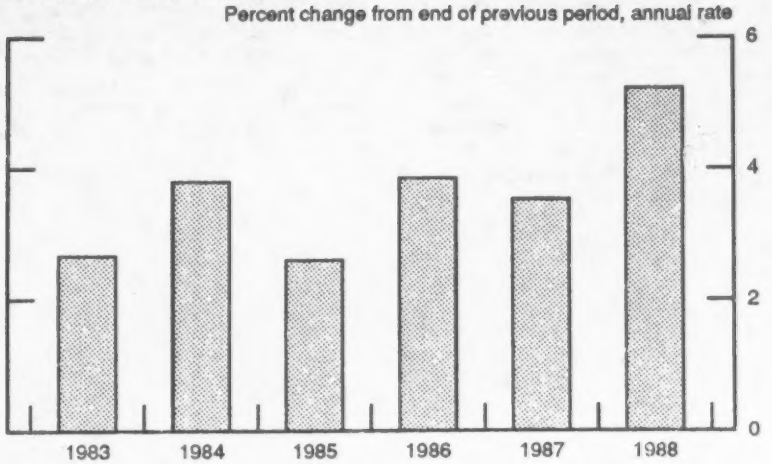
Percent change from end of previous period, annual rate



* Consumer Price Index for all urban consumers.

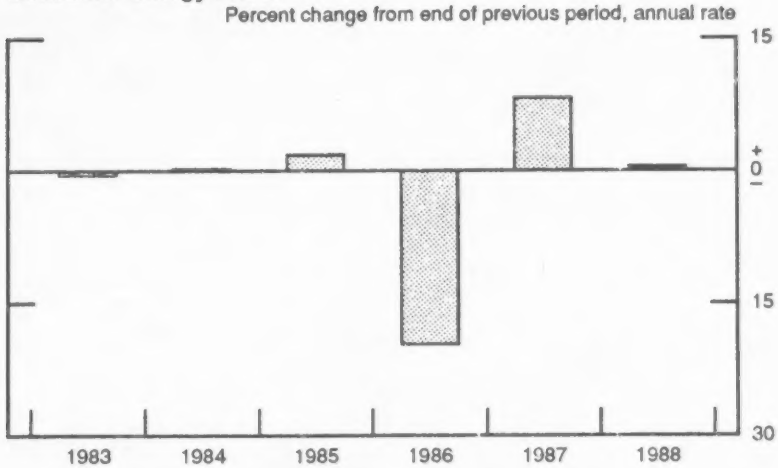
Consumer Food Prices *

Percent change from end of previous period, annual rate



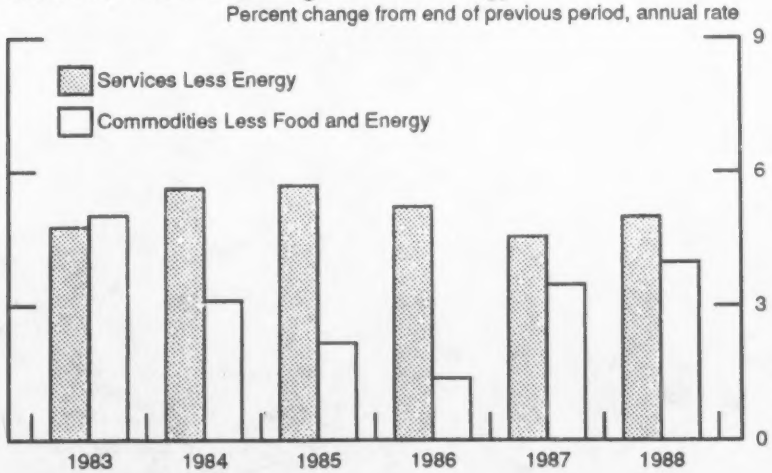
Consumer Energy Prices *

Percent change from end of previous period, annual rate



Consumer Prices Excluding Food and Energy *

Percent change from end of previous period, annual rate



* Consumer Price Index for all urban consumers.

probably reflected, in large part, the past year's acceleration in hourly compensation and unit labor costs in the domestic economy. By contrast, the pressures from rising import prices appeared to be a bit less pronounced than in 1987. Even so, higher prices for imports probably were an influence in some areas; the retail prices of apparel, for example, rose nearly 5 percent for the second year in a row. The price increases for industrial commodities slowed in 1988 after steep increases during 1987; by most measures, however, the year-to-year rate of rise in these prices has remained somewhat above that of inflation in general. The producer prices of intermediate inputs, excluding food and energy, rose more than 7 percent during 1988, reflecting the high levels of capacity utilization in a number of industries, as well as the tightening of labor markets.

Section 3: Monetary Policy and Financial Developments During 1988

During 1988, Federal Reserve policy continued to be characterized by a flexible approach to monetary targeting, with System actions responding to emerging conditions in the economy and in financial markets, as well as to growth of the monetary aggregates. This approach has been necessitated by the short-run variability in the relation of these aggregates to economic performance, owing primarily to their sizable response to changing interest rates, in addition to spending. In the early months of last year, monetary policy was eased in light of incoming data suggesting a weakening in the economic expansion and the possibility of further financial market disruptions. Subsequent information, however, suggested a growing threat of inflationary pressures, as the economic expansion remained strong and margins of available labor and productive capacity dwindled. To head off a potential acceleration of inflation, the Committee tightened reserve conditions in a series of steps beginning in the spring and extending into 1989. The monetary aggregates were running close to the upper ends of their growth ranges prior to the tightening actions, but subsequently slowed, and they closed the year in the middle portions of their ranges.

Implementation of Monetary Policy

During the early months of last year, the Federal Open Market Committee sought to counter any economic weakness that could result from the stock market break and to ensure the smooth functioning of domestic financial markets. Indicators of aggregate demand suggested that there was a risk of weakness in the economy that warranted some easing of monetary policy. In addition, special emphasis was placed on monitoring domestic financial markets for signs of any new distress and on being alert to the need to alter the provision of reserves quickly in response to any trouble. Against this backdrop, reserve conditions were eased slightly in early February, contributing to reductions in short- and long-term interest rates.

Throughout the spring, incoming economic data suggested that the economy had overcome the effects of lower equity prices on confidence and spending. This information indicated that the economy was expanding at a rate that threatened progress toward long-run price stability. Bond yields increased during this period, as indications of economic strength contradicted the earlier market forecasts of a general slowdown and raised concerns about an uptrend in inflation. Based on evidence of a greater potential for higher wage and price inflation and in the context of rapid growth in M2 and M3, the Federal Reserve firmed reserve conditions further in a series of steps beginning in March and culminating in early August with a one-half percentage point hike in the discount rate. These moves brought about substantial increases in short-term interest rates, but were accompanied by only small increases in Treasury bond yields, as investors viewed Federal Reserve actions as heading off a long-term acceleration of inflation. The upturn in short-term interest rates, coupled with more optimistic expectations of future inflation, helped boost the foreign exchange value of the dollar during this period.

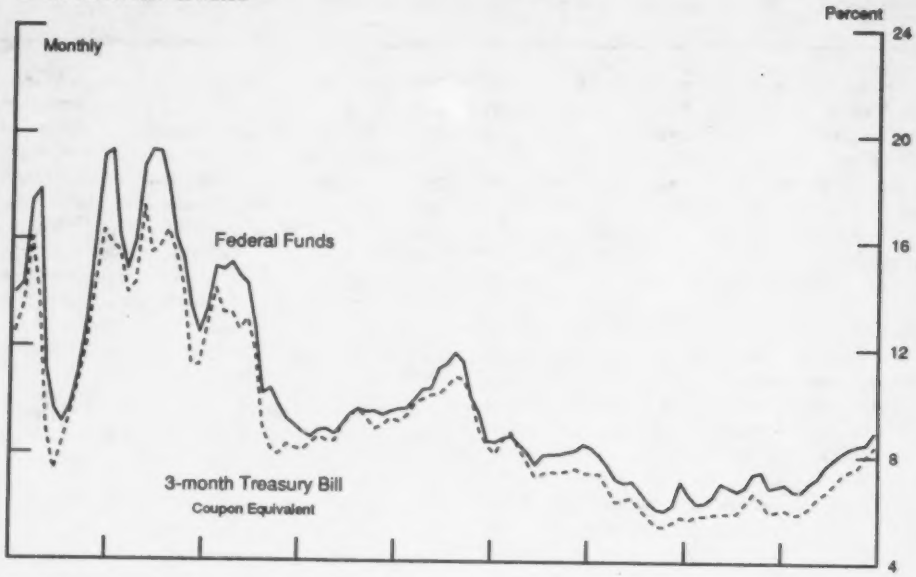
In view of the policy restraint already in place, which was being reflected in slowing growth in the monetary aggregates, and some signs that economic growth may have been moderating, the Committee postponed any further action over the late summer and early fall, awaiting further information on the course of the economy. During October and November, the foreign exchange value of the dollar declined, partly in response to a rise in foreign interest rates relative to U.S. market interest rates and to investor concern over the lack of progress in reducing the U.S. federal budget deficit and the slowing improvement in the U.S. trade deficit.

In late fall, incoming data suggested that previous monetary restraint had not been sufficient to relieve the potential for higher inflation and the Committee resumed tightening reserve conditions in a series of moves beginning in November and extending into the new year. As a result of these measures, short-term market interest rates rose. In contrast, bond yields continued to fluctuate narrowly, signalling the market's continued confidence that inflationary pressures would be contained. This confidence together with the firming of policy contributed to a strengthening of the foreign exchange value of the dollar.

Behavior of Money and Credit

M2 expanded 5.3 percent last year, just below the middle of its 4-to-8 percent target range. Although demands for M2 were supported by strong growth in income and spending, they were reduced by increases in its opportunity cost—that is, the difference between market interest rates and the yields on M2-type instruments. Early in the year, opportunity costs had declined in response to decreases in market interest rates relative to deposit rates in late 1987 and early 1988,

Short-Term Interest Rates



Long-Term Interest Rates

Observations are monthly averages of daily data;
last observation is for December 1988.

leading to strong growth in M2 and a decline in its velocity—the ratio of nominal GNP to M2—during the first quarter. But as market interest rates moved upward after March and deposit rates lagged behind, its velocity subsequently reversed, rising 1.7 percent for all of 1988. The response of offering rates was especially sluggish in the last part of 1988. One reason for this may have been regulatory pressure on thrifts and the closing of many insolvent institutions, which often had been overly aggressive in pricing deposits. The extent to which thrifts were offering higher rates than banks on small time deposits was greatly reduced, and partly as a consequence, growth of retail deposits was much stronger at banks than at thrifts.

The composition of the growth of the components of M2 also responded to changes in deposit rates and market interest rates. Yields on liquid deposits—interest-bearing checking deposits, savings deposits, and money market deposit accounts—changed very little over the year. During the first half of 1988, liquid retail deposits expanded at a strong pace, largely reflecting increases in their relative attractiveness stemming from declines in market interest rates and, to a lesser extent, in rates on small time deposits. Their growth slowed markedly over the last half of 1988, following the reversal in the pattern of interest rate movements. Growth in small denomination time deposits was particularly robust throughout 1988. Expansion in the early months of the year may have resulted, in part, from shifts in household investment preferences away from stocks toward the safety of these savings instruments. Later, rising yields on small time deposits relative to those on more liquid deposits led households to shift funds from liquid to small denomination time deposit accounts.

M3 grew 6.2 percent last year, placing it slightly above the midpoint of its 4-to-8 percent target range. This increase from a 5.8 percent growth in 1987 reflected a modest pickup in the issuance of managed liabilities in M3 to fund credit expansion at banks and thrift institutions. M3 followed a trajectory near the upper end of its target range in the first half of 1988, but moderated thereafter, in association with slowing credit growth at depository institutions. For the year, large time deposits and other managed liabilities included in M3 but not in M2 grew rapidly, as inflows into M2-type deposits were insufficient for banks and thrifts to finance their desired pace of asset expansion. This was particularly true in the second half of the year when M2 growth moderated. To some extent, M3 growth last year also was bolstered compared with 1987 by a greater reliance by banks on managed liabilities included in M3 than on nonmoney stock instruments, such as bank borrowings from overseas branches. In contrast, as in recent years, the heavy use of Federal Home Loan Bank advances by thrift institutions—which are not included in M3—has had a moderating effect on M3 growth.

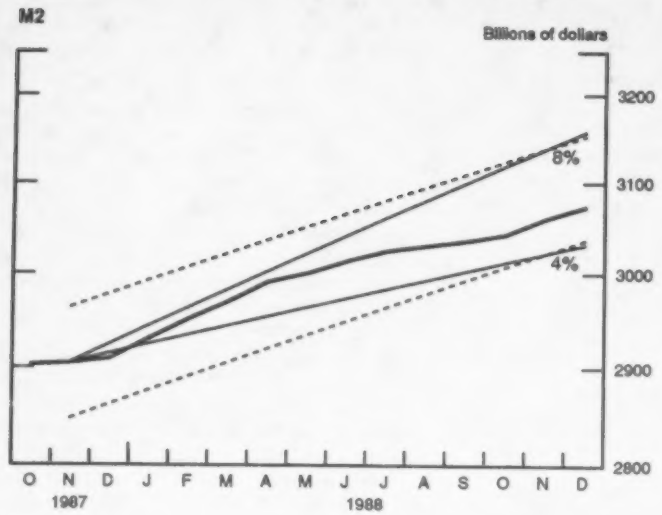
At 4.3 percent, M1 growth last year was down more than 2 percentage points from 1987. Growth of interest-bearing checking accounts moderated while demand deposits continued running off. As in recent years, the growth of M1 displayed great sensitivity to changes in market rates of interest. Households shifted savings balances between NOW accounts and those M2 components, such as small time deposits, whose yields responded to increases in market rates much more quickly than those on NOW accounts. Because substitutions of this type are internalized within M2, M2 has displayed less sensitivity to interest rates than has M1 in this decade. Demand deposits, the other highly interest sensitive component of M1, again declined in 1988 partly reflecting increases in their opportunity costs and declines in compensating balances. The amount of such balances that businesses must hold in these noninterest bearing accounts to compensate banks for services falls when interest rates rise.

The debt of domestic nonfinancial sectors expanded nearly 8¾ percent during 1988, down from 9 percent in 1987, placing it near the midpoint of the Committee's 7-to-11 percent monitoring range. Although debt expansion was well below the pace of the mid-1980s, it still exceeded nominal GNP growth. Federal debt grew marginally faster last year than in 1987. Expansion in nonfederal debt moderated, as state and local governments trimmed debt issuance, and as households expanded their mortgage debt at a less robust pace in response to higher mortgage rates. Growth of business debt picked up a bit from its 1987 pace, with short-term debt growing faster than long-term debt. Corporate borrowing was particularly strong, reflecting increased external financing needs for capital investments and for mergers, buyouts, and stock repurchases.

Other Financial Developments

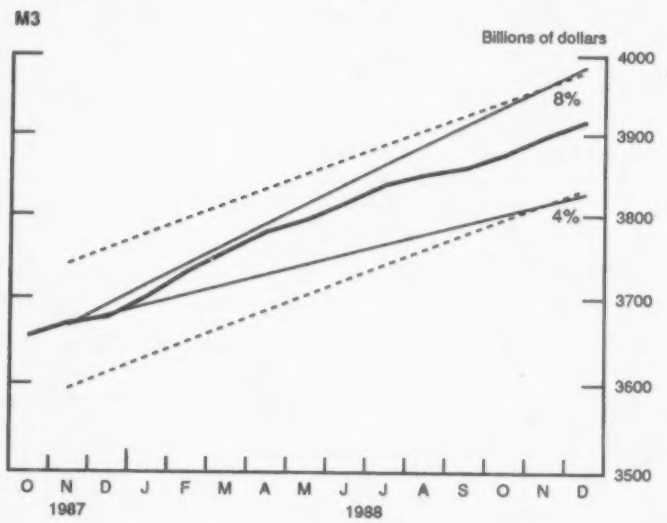
Although the economy continued to grow at a strong pace last year and the financial markets recovered from their skittishness following the stock market break of 1987, financial developments in certain markets and sectors warranted the attention of policymakers. Of particular note were the worsening condition of the thrift industry, the need to achieve sounder capitalization of commercial banking organizations, and the rising indebtedness of businesses involved in restructuring activity.

Ranges and Actual Money Growth



Rate of Growth

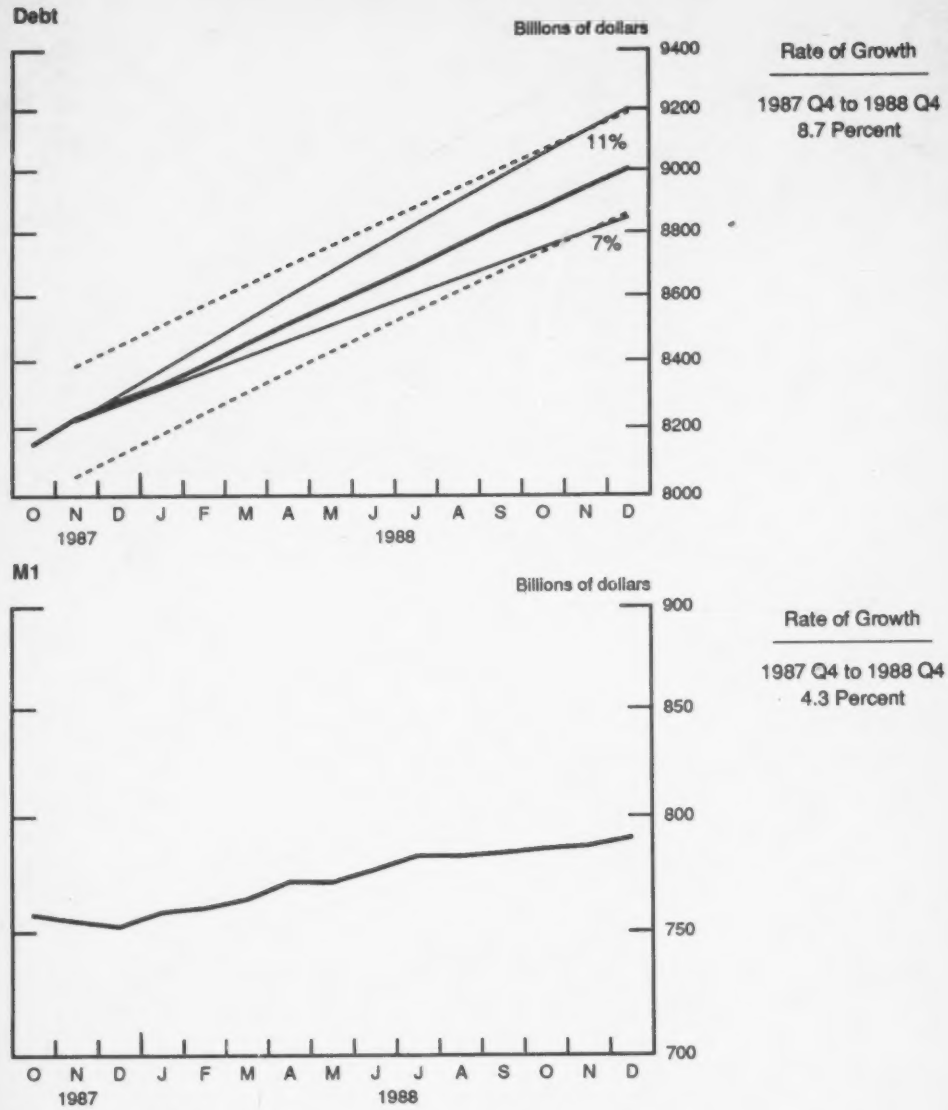
1987 Q4 to 1988 Q4
5.3 Percent



Rate of Growth

1987 Q4 to 1988 Q4
6.2 Percent

Ranges and Actual Growth of Money and Debt



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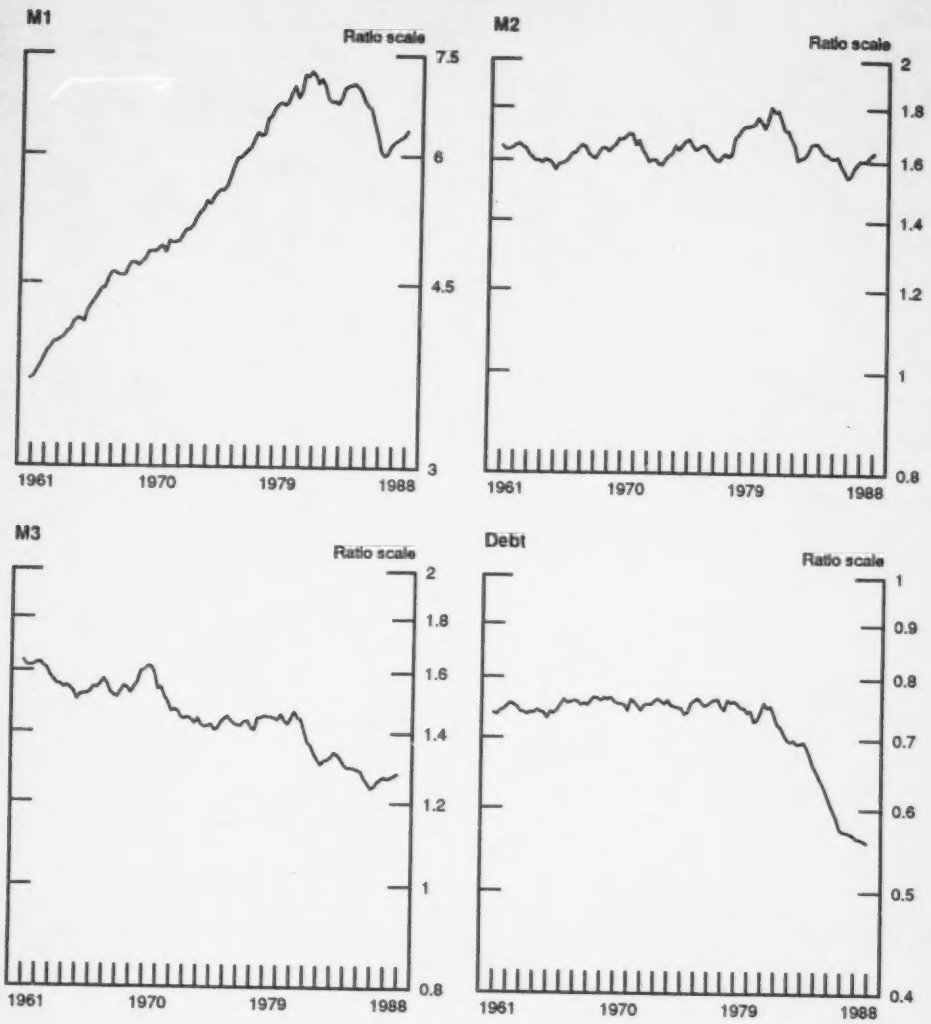
Velocity of Money and Debt

(Quarterly)



Growth of Money and Debt[1] (Percentage changes)

	M1	M2	M3	Debt of domestic nonfinancial sectors
Fourth quarter to fourth quarter				
1979	7.7	8.2	10.4	12.3
1980	7.4	9.0	9.6	9.6
1981	5.2 (2.5)[2]	9.3	12.3	10.0
1982	8.7	9.1	9.9	9.0
1983	10.2	12.1	9.8	11.3
1984	5.3	7.7	10.5	14.2
1985	12.0 (13.0)[3]	8.9	7.7	13.2
1986	15.6	9.3	9.1	13.3
1987	6.4	4.2	5.7	9.8
1988	4.3	5.3	6.2	8.7
Quarterly growth rates (annual rates)				
1988 Q1	3.2	6.2	6.8	8.2
Q2	6.4	6.9	7.2	8.7
Q3	5.2	3.8	5.5	8.6
Q4	2.4	3.8	4.9	8.4

1. M1, M2, and M3 incorporate effects of benchmark and seasonal adjustment revisions made in February 1989.
2. M1 figure in parentheses is adjusted for shifts to NOW accounts in 1981.
3. M1 figure in parentheses is the annualized growth rate from the second to the fourth quarter of 1985.

As the year wore on, the dimensions of the problems facing the thrift industry became clearer. Although industry losses eased in the third quarter from their record levels in the first half of 1988, this development appears largely to have reflected FSLIC assistance transactions during the third quarter, rather than a significant underlying improvement in earnings.

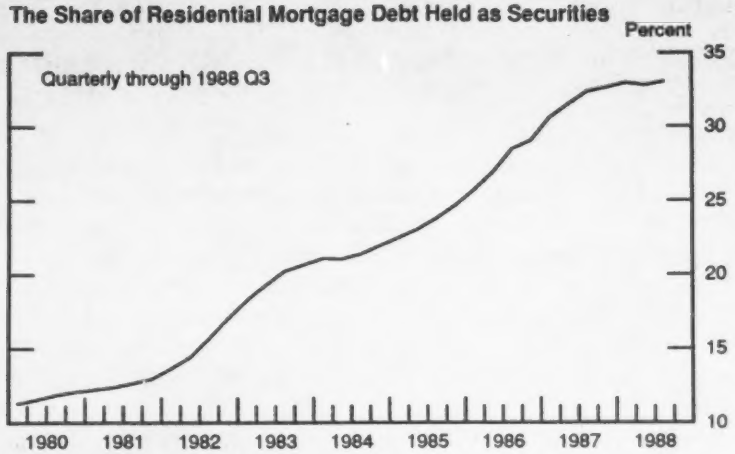
Despite the turmoil in the thrift industry, there has been no noticeable disruption of mortgage activity. In part, the development of a deep secondary mortgage market has separated the origination of loans from the need to fund them. For this reason, the base of mortgage credit has been broadened in recent years, making the provision of mortgages far less dependent on the condition of any one type of financial institution or on the regional supply of loanable funds. During the 1980s, the share of home mortgage credit held in securitized form has increased from about 10 percent to more than one-third. The spread between interest rates on fixed-rate mortgages, which have an average life of roughly ten years, and yields on ten-year Treasury notes did not change appreciably over 1988, which also implies that the mortgage markets continued functioning well despite the problems of many savings and loan associations.

In contrast to the thrift industry, preliminary data indicate that U.S. commercial bank profits were reasonably strong in 1988, even after abstracting from the one-time jump in fourth quarter earnings associated with the resumption of Brazilian debt payments. Moreover, most large money-center banks with a significant amount of loans to developing countries have continued to build capital, which provides a cushion against default losses. Giving added impetus to efforts to raise equity was the agreement by bank supervisory authorities of major industrial countries to set more stringent, risk-based standards of capital adequacy. These standards, to be fully phased in by 1992, place a greater emphasis on equity capital, take into account the off-balance sheet activities of banks, and provide a more uniform regulatory treatment of banks based in different countries.

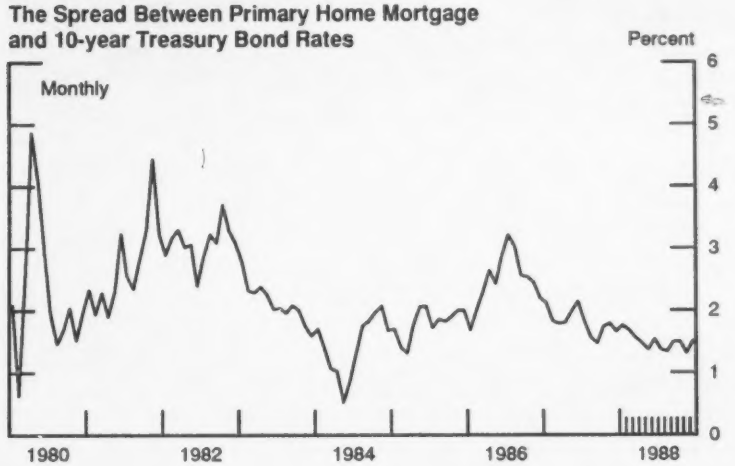
As in 1987, banks lent considerable sums to finance mergers and leveraged buyouts. Although banks have reported that these loans have had a lower rate of loss than all other business loans combined, and although LBO borrowers typically obtain some insurance against higher loan rates, concern remains about bank exposure to losses in the event of an adverse turn in business conditions. For this reason, the Federal Reserve is closely monitoring developments in this area and has just revised its bank examination guidelines to ensure that member bank loans used to finance buyouts and other highly levered corporate restructurings meet prudent credit standards.

Leveraged buyouts and other mergers and restructurings led to a record pace of net equity retirements by nonfinancial corporations in 1988. Despite the large volume of this activity in recent years, the overall corporate debt-to-equity ratio is not out of line with observations since the early 1970s, reflecting increased market valuation of equities since the early 1980s. Much of the recent financial restructuring has been a response to fundamental economic factors; it may impose a discipline on corporate management, which in turn can stimulate efforts to improve productivity. Nevertheless, heavy commitments of cash flow to service debt reduce a firm's ability to cope with stresses or industry-specific shocks. To some extent, the substitution of debt for equity is motivated by simple tax-saving considerations, such as the full deduction for interest payments and the double taxation of dividends. For these reasons, reforming the corporate tax system should be a component of public policy in addressing this difficult issue.

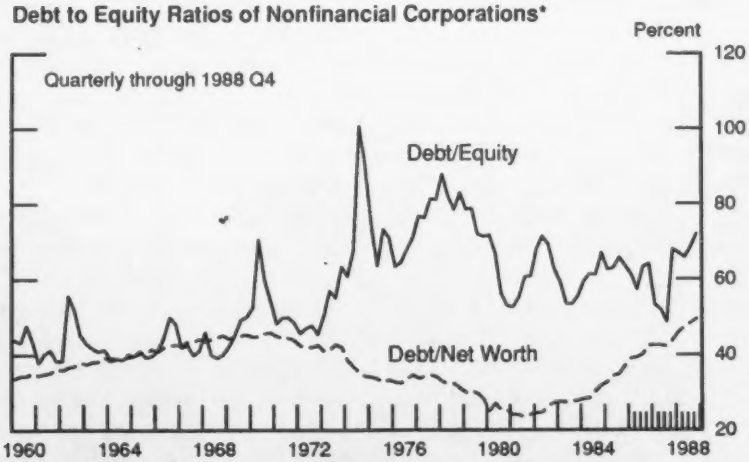
The Share of Residential Mortgage Debt Held as Securities



The Spread Between Primary Home Mortgage and 10-year Treasury Bond Rates



Debt to Equity Ratios of Nonfinancial Corporations*



*Debt and equity are at market value. In computing net worth, tangible assets are valued at replacement cost or market value while financial assets are valued at cost.

The CHAIRMAN. I would be very pleased now to have you give us your oral summary.

STATEMENT OF ALAN GREENSPAN, CHAIRMAN, BOARD OF GOVERNORS, FEDERAL RESERVE SYSTEM

Mr. GREENSPAN. Thank you, Mr. Chairman.

I also ask that my full testimony be included as part of the record as well. I will try to shorten it to a certain extent.

Last year was a challenging one for monetary policy. Early in the year, uncertainties remained about the impact of the October 1987 worldwide stock market break on the economic expansion and financial system. Given these risks, the Federal Reserve increased the availability of bank reserves slightly further and monitored financial and economic indicators closely for any signs that the economic expansion was faltering.

Gradually, however, it became clear that the economic expansion remained well on track and that the balance of risks was shifting in the direction of higher inflation. Consequently, the Federal Open Market Committee applied increased restraints to reserve positions in a series of steps beginning in the spring of 1988 and extending to the current period. In addition, the discount rate was raised from 6 to 6.5 percent in August.

The policy restraint led to an appreciable rise in short-term market interest rates and a moderation of money growth beginning in the spring of 1988. M2 and M3 finished the year around the middle of their 4-to-8 percent annual target ranges.

Despite tightening money markets, longer term interest rates have been remarkably stable. Moreover, the stock market recovered relatively steadily over the year and into 1989, and the dollar has been fairly stable since late 1987.

The optimism of domestic and foreign investors evident in financial markets reflected expectations that inflation would not intensify appreciably as well as the solid performance of the economy and prospects for its continuation.

Our GNP expanded by around 3.25 percent in 1988, adjusted for crop losses caused by the drought. This increase helped push the unemployment rate below 5.5 percent, its lowest level since the mid-1970's. Employment gains in 1987 and 1988 were strong in nearly every major sector of the American economy, including manufacturing. Although in 1988 farmers suffered one of their worst crop losses in this century, the situation in agriculture remains fundamentally much improved from that earlier in the 1980s.

However, last year's economic performance had some disappointing features. The Federal budget deficit remained high and our national saving low. This contributed to continued large current account and trade deficits. In addition, overall inflation in the area of 4 to 4.5 percent during 1988 was a little above the general range in which it had fluctuated in the mid-1980's. The drought boosted food prices, adding somewhat to inflation last year, but this was largely offset by a leveling off of energy prices. Prices of other consumer goods and services accelerated a bit. This acceleration is troubling,

especially with inflation already at a level that would be unsatisfactory if it persisted.

Although the step-up in consumer inflation to date has been rather small, some signs have emerged of greater acceleration in the broad measures of costs of production. Wage gains accelerated toward the end of last year. Moreover, benefits took an unusually large jump in 1988, adding to business costs, and prices of materials also rose at a faster pace.

On the whole, the economic expansion remains vigorous and unusually well-balanced after more than 6 years. But with the economy running close to its potential, the risks seem to be on the side of a further strengthening of price pressures. In these circumstances, the Federal Reserve remains more inclined to act in the direction of restraint than toward stimulus.

The determination to resist any pickup in inflation in 1989 and especially to move over time toward price stability shaped the committee's decisions with respect to monetary and credit ranges for 1989. The FOMC lowered the range for M2 by a full percentage point to 3 to 7 percent and reduced the range for M3 by one-half of a percentage point to 3.5 to 7.5 percent. The committee also lowered the monitoring range for domestic nonfinancial sector debt by one-half of a percentage point to a range of 6.5 to 10.5 percentage points. These were the ranges adopted on a tentative basis last June.

We decided to retain the wider, 4-percentage-point ranges that were adopted in 1988. The potential for sizable and somewhat unpredictable movements in velocity requires fairly broad ranges in order to have reasonable assurance that the targets are consistent with satisfactory economic performance.

In view of the rather loose relationship of the aggregates to GNP and prices that have developed in the 1980's, the committee agreed to continue its current approach to the implementation of policy, which involves monitoring a variety of economic and financial indicators, including growth of money and debt.

In this regard, appropriate growth of M2 and M3 relative to their ranges will be determined in part by developments during the year.

The Federal Reserve expects its policy in 1989 to support continued economic expansion while putting in place conditions for a gradual easing in the rate of inflation over time. However, the wage and price process may have developed some momentum. The central tendency of forecasts made by members of the Federal Reserve Board and presidents of Federal Reserve Banks is for inflation to rise slightly in 1989. But let me stress that the current rate of inflation, let alone an increase, is not acceptable, and our policies are designed to reduce inflation in coming years.

This restraint will involve containing pressures on our productive resources, and, thus, some slowing in the underlying rate of growth of real GNP is likely in 1989. The central tendency of GNP growth forecasts for this year of Board members and Reserve Bank presidents is between 2.5 and 3 percent; abstracting from the expected rebound from last year's drought losses, real GNP is projected to grow at closer to a 2 percent rate. With demands for labor growing more in line with expansion of the labor force, the unemployment rate is expected to remain near its recent level over 1989.

Maximum sustainable economic growth over time is the Federal Reserve's ultimate objective. The primary role of monetary policy in the pursuit of this goal is to foster price stability. Price stability contributes to economic efficiency in part by reducing the uncertainties that tend to inhibit investment. Also, it directs resources to productive economic activity that otherwise would tend to be diverted to mitigating the financial effects of inflation.

Price stability—indeed, even preventing inflation from accelerating—requires that aggregate demand be in line with potential aggregate supply. In the long run, that balance depends crucially on monetary policy. Inflation cannot persist without a supporting expansion in money and credit; conversely, price stability requires moderate growth in money—at rates below those prevailing in recent years.

In the short run, demands can fall short of or run ahead of available resources. Monetary policy can assist in bringing about a better match between demand and potential supply and thereby contribute to aggregate price stability.

When the economy is operating below capacity, bringing demand in line with supply can involve real GNP growth that is faster for a time than its long-run potential. But when the economy is operating essentially at capacity, monetary policy cannot force demand to expand more rapidly than potential supply without adverse consequences. Such an attempt will result in accelerating prices and wages, as producers bid for scarcer, and at the margin less productive, labor and capital. Over time it would result in little, if any, additional output.

As a result of robust expansion in the last few years, the U.S. economy has absorbed much of its unused labor and capital resources. No one can say precisely which level of resource utilization marks the dividing line between accelerating and decelerating prices. However, the evidence—in the form of direct measures of prices and wages—is clear that we are now in the vicinity of that line.

Thus, policies that foster more economic growth, if such growth is to be sustainable over the long run, should focus on aggregate supply. The United States could increase growth of supply by stepping up the pace of capital accumulation. Government policies can contribute to a higher rate of investment. Tax policies can help by ensuring that returns from capital are not taxed excessively or unpredictably. And fiscal policy can help boost the national saving rate through a reduction in government dissaving. Congress should follow the Gramm-Rudman-Hollings timetable and then seek a budgetary surplus by the mid-1990's, in my judgment.

An improving Federal budget position should have a variety of favorable effects. It can pave the way for a reduction in our external imbalance by freeing resources currently absorbed by domestic demand. By putting downward pressure on real interest rates, it can encourage domestic business capital formation and make housing more affordable. It can encourage households and businesses to focus more on the long run in economic planning.

Monetary policy also has a role to play in encouraging capital formation and economic growth over time, by providing a stable price environment. Although the relationship between growth of

money and the economy can vary from year to year, over the long haul there is a close relationship between money and prices. The historical evidence suggests that price stability ultimately will require a somewhat slower M2 growth than we have experienced in recent years.

The Federal Reserve recognizes that monetary policy over the coming year will be carried out against the backdrop of a financial system facing certain difficulties. The thrift and FSLIC situation is perhaps most pressing. The Administration has proposed an extensive, workable plan for dealing with this matter. There appears to have been little, if any, effect of the S&L problem on mortgage availability in housing—thanks in part to financial innovation in the form of the mortgage-backed securities market. However, without quick and effective action the situation could deteriorate.

Developments in the corporate sector warrant close scrutiny as well. As you know, corporate equity continues to be retired at a startling rate in conjunction with LBO's and other mergers and restructurings and has involved issuance of a correspondingly large amount of debt. Although these restructurings often may improve economic efficiency, the higher leverage leaves these firms and potentially their creditors more vulnerable to financial difficulties in the event of a downturn. The Federal Reserve and other Federal regulators are instructing bank examiners to review especially carefully loans to highly leveraged firms in order to maintain a safe and sound banking system.

The international economy also will command the continuing attention of policymakers around the world. Among the industrial countries, greater concern about rising inflation followed the substantial economic growth recorded last year. Meanwhile, the process of adjustment of international imbalances appeared to have slowed somewhat in the second half of last year, and many developing countries continued to face serious problems of achieving sustained economic growth, fostering development, and servicing large external debts.

Some have argued that these financial stresses, taken together, could hamstring the Federal Reserve's anti-inflationary policy. Certainly we have to take account of the effects of our actions on all sectors of the domestic and international economy and on financial markets; at the same time we recognize that monetary policy is not the instrument to deal with structural financial stresses and imbalances here and abroad—and that attempts to do so may even worsen these problems. Lowering interest rates in the short run through more rapid money growth against countervailing market pressures would quickly raise inflationary expectations, leading sooner to higher, not lower, interest rates.

Instead, the structural financial problems require the prompt application of microeconomically oriented solutions within the supervisory, regulatory, and legal framework. Imbalances in the world economy require the continued, patient application of responsible macroeconomic policies in the United States and in other industrial countries, as well as further progress in economic reforms by the developing countries.

For its part, the Federal Reserve will continue to seek monetary conditions that will reduce inflation. Our major trading partners

are following consistent policies in their own economies. Together, these policies should bring about a more stable financial environment and promote long-run worldwide economic growth.

Relatively stable long-term nominal interest rates and flattening yield curves around the industrial world are strong evidence that savers and investors are in accord with this view. Monetary policy, at least for the moment, appears on track in the United States. The task is to keep it on track while making necessary adjustments to fiscal policy and reforms to the regulation of financial institutions. In this way, we can ensure vigorous and balanced economic conditions over the long run.

Thank you very much.

[The complete prepared statement of Alan Greenspan follows:]

For release on delivery
10:00 a.m., E.S.T
February 21, 1989

Statement by

Alan Greenspan

Chairman, Board of Governors of the Federal Reserve System

before the

Committee on Banking, Housing, and Urban Affairs

of the

U.S. Senate

February 21, 1989

Mr. Chairman and members of the Committee, I appreciate this opportunity to discuss with you recent monetary policy and our plans for the future. You have received our formal report to the Congress. This morning, I would like to summarize the important points of that report and to place monetary policy in the context of the overall economic and financial situation.

Economic and Monetary Developments in 1988

Last year was a challenging one for monetary policy. Early in the year, uncertainties remained about the impact of the October 1987 worldwide stock market break on the economic expansion and financial system. Given these risks, the Federal Reserve increased the availability of bank reserves slightly further, adding to the easing put in place immediately following October 19; at the same time we monitored financial and economic indicators closely for any signs that the economic expansion was faltering.

Gradually, however, it became clear that the economic expansion remained well on track and that market confidence was on the mend. Spending was robust, and dwindling margins of unused resources as employment and output registered sizable gains indicated that the balance of risks was shifting in the direction of higher inflation. Consequently, the FOMC applied increased restraint to reserve positions in a series of steps beginning in the

spring of 1988 and extending to the current period. In addition, the discount rate was raised from 6 to 6-1/2 percent in August.

The policy restraint led to an appreciable rise in short-term market interest rates beginning in the spring of 1988. Growth of money moderated over the year as rates on deposits lagged the rise in market interest rates. M2 and M3, which were near the upper ends of their target ranges early in the year, slowed considerably in subsequent months and finished the year around the middle of their 4 to 8 percent annual target ranges. Growth of M1 also was restrained by higher interest rates, slowing to about 4 percent, while the monetary base grew only a bit less rapidly than in 1987, as currency continued to expand at a strong pace. Thus, in both 1987 and 1988, most money measures grew appreciably more slowly than they had in many years. This more moderate pace of monetary expansion has been a necessary aspect of a monetary policy designed to contain inflation and promote price stability and economic growth over time.

Despite tightening money markets, longer-term interest rates have been remarkably stable. Yields on Treasury bonds, for example, remained in a fairly narrow range around 9 percent for most of the year and have continued in that range so far in 1989. Moreover, the stock market recovered relatively steadily over the year and into

1989. The performance of the bond and stock markets in the face of rising short-term rates seemed to stem from expectations of continued relatively balanced economic expansion in the United States with inflation pressures not likely to intensify. U.S. investments looked attractive under these circumstances, and the dollar's average value against major foreign currencies recovered from the late 1987 plunge and was relatively stable over the course of the year.

The optimism of domestic and foreign investors evident in financial markets reflected the solid performance of the economy and prospects for its continuation. Our GNP expanded by around 3-1/4 percent in 1988, adjusted for crop losses caused by the drought. Over the year, payroll employment rose by 3.7 million. Since the economic expansion began in late 1982, employment in the United States has increased by more than 17 million people, pushing the unemployment rate below 5-1/2 percent, its lowest level since the mid-1970s. Employment gains in 1987 and 1988 were strong in nearly every major sector of the American economy, including manufacturing, construction, trade, and services. Although in 1988 farmers suffered one of their worst crop losses in this century, the situation in agriculture remains fundamentally much improved from that earlier in the 1980s. Industrial production in manufacturing rose 5-1/2 percent, bringing average capacity utilization to the highest level

since the late 1970s. Some industries that had been hit especially hard by the recession of 1981-82 and by the erosion of international competitiveness owing to the rise in the value of the dollar now are considerably improved. Quite a few firms in those industries are operating essentially flat out and experiencing notable profit improvement.

However, last year's economic performance had some disappointing features. The federal budget deficit remained high and our national saving low. This contributed to a continued large current account and trade deficit. By keeping pressure on interest rates, the low rate of saving also was a factor behind the performance of business fixed investment last year. Investment slowed from 1987, especially in the second half of the year, even in the face of relatively rapid expansion of production and high levels of capacity utilization.

In addition, overall inflation, in the area of 4 to 4-1/2 percent, during 1988 was a little above the general range in which it had fluctuated in the mid 1980s. The drought boosted food prices, adding somewhat to inflation last year, but this was largely offset by a leveling off of energy prices. Prices of other consumer goods and services accelerated a bit. This acceleration is troubling, especially with inflation already at a level that would be unsatisfactory if it persisted.

Although the step-up in consumer inflation to date has been rather small, some signs have emerged of greater acceleration in broad measures of costs of production. Wage gains accelerated toward the end of last year. Moreover, benefits took an unusually large jump in 1988, boosted in part by a sharp rise in health insurance costs and a hike in social security taxes--both of which add to business costs as directly as do wages. Overall, the employment cost index, a comprehensive measure of hourly wage and benefit rates, rose 5 percent in 1988, up significantly from 1987. Materials inputs also were adding to costs; the producer price index for intermediate materials and supplies excluding food and energy rose about 7 percent over the past year.

Economic Prospects and Monetary Policy for 1989

On the whole, the economic expansion remains vigorous and unusually well balanced after more than six years. There are few of the tell-tale distortions, such as widespread inventory overhangs or constricted profit margins, that typically have signaled the last phases of expansions. But with the economy running close to its potential, the risks seem to be on the side of a further strengthening of price pressures. In these circumstances, the Federal Reserve remains more inclined to act in the direction of restraint than toward stimulus.

The determination to resist any pickup in inflation in 1989 and especially to move over time toward price stability shaped the Committee's decisions with respect to monetary and credit ranges for 1989. The Committee agreed that, particularly in this environment, progress toward these objectives likely will require continuing restraint on growth in money and credit.

To this end, the Committee lowered the range for M2 by a full percentage point to 3 to 7 percent and reduced the range for M3 by 1/2 percentage point to 3-1/2 to 7-1/2 percent. The Committee also lowered the monitoring range for domestic nonfinancial sector debt by 1/2 percentage point to 6-1/2 to 10-1/2 percentage point. These were the ranges adopted on a tentative basis last June.

We decided to retain the wider, 4-percentage-point ranges that were adopted in 1988. The relationship of the monetary aggregates to economic performance has been quite variable in the 1980s. The relatively high interest elasticity of the aggregates, even after deregulation, makes them very sensitive to changes in money market conditions, which in turn can respond to developments in the real economy or prices. The resulting potential for sizable movements in velocity requires broader ranges in order to have reasonable assurance that the targets are consistent with satisfactory economic performance. Considerable uncertainties regarding the effects on the monetary

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aggregates of the resolution of the thrift institution difficulties also argue for relatively wide ranges this year. Depending on the pace of asset growth of thrifts and changes in their deposit pricing policies, the composition and growth of their liabilities could vary substantially from past patterns.

For the same reasons, the Committee agreed to continue its current approach to the implementation of policy, which involves monitoring a variety of economic and financial indicators, including growth of money and debt. In this regard, appropriate growth of M2 and M3 relative to their ranges will be determined in part by developments during the year. At present, it appears that the velocities of M2 and M3 are likely to rise this year, in response to the market interest rate increases to date and unusually sluggish adjustment of deposit rates.

The Federal Reserve expects its policy in 1989 to support continued economic expansion while putting in place conditions for a gradual easing in the rate of inflation over time. However, the wage and price process may have developed some momentum. The central tendency of forecasts made by members of the Federal Reserve Board and presidents of Federal Reserve Banks is for inflation to rise slightly in 1989. But let me stress that the current rate of inflation, let alone an increase, is not acceptable, and our policies are designed to reduce inflation in coming years.

This restraint will involve containing pressures on our productive resources and, thus, some slowing in the underlying rate of growth of real GNP is likely in 1989. The central tendency of GNP forecasts for this year of Board members and Reserve Bank presidents is 2-1/2 to 3 percent; abstracting from the expected rebound from last year's drought losses, real GNP is projected to grow at closer to a 2 percent rate. Net exports are expected to continue to improve in 1989 as we make further progress on reducing our external imbalances, but this implies the need for restraint on domestic demand to contain pressures on our productive resources. With demands for labor growing more in line with expansion of the labor force, the unemployment rate is expected to remain near its recent level over 1989.

Monetary Policy and Long-run Economic Growth

Maximum sustainable economic growth over time is the Federal Reserve's ultimate objective. The primary role of monetary policy in the pursuit of this goal is to foster price stability. For all practical purposes, price stability means that expected changes in the average price level are small enough and gradual enough that they do not materially enter business and household financial decisions. Price stability contributes to economic efficiency in part by reducing the uncertainties that tend to inhibit investment. Also, it directs resources to productive

economic activity that otherwise would tend to be diverted to mitigating the financial effects of inflation.

Price stability--indeed, even preventing inflation from accelerating--requires that aggregate demand be in line with potential aggregate supply. In the long run, that balance depends crucially on monetary policy. Inflation cannot persist without a supporting expansion in money and credit; conversely, price stability requires moderate growth in money--at rates below those prevailing in recent years.

In the short run, demands can fall short of, or run ahead of, available resources, with implications for wage and price pressures and the appropriate stance of monetary policy. By altering reserve conditions and the money supply, and thus interest and exchange rates and wealth positions, monetary policy can assist in bringing about a better match between demand and potential supply and thereby contribute to aggregate price stability.

When the economy is operating below capacity, bringing demand in line with supply can involve real GNP growth that is faster for a time than its long-run potential. For example, in the mid-1980s, the U.S. economy was recovering from a deep recession; with utilization of labor and capital not nearly complete, we were able to bring these resources back into the production process at a pace that substantially exceeded their underlying growth rates. In those circumstances, it is not surprising that growth of

real GNP was relatively rapid while inflation performance was reasonably good.

But when the economy is operating essentially at capacity, monetary policy cannot force demand to expand more rapidly than potential supply without adverse consequences. Such an attempt will result in accelerating prices and wages, as producers bid for scarcer, and at the margin less productive, labor and capital. Over time it would result in little if any additional output.

As a result of robust expansion in the last few years, the U.S. economy has absorbed much of its unused labor and capital resources. No one can say precisely which level of resource utilization marks the dividing line between accelerating and decelerating prices. However, the evidence--in the form of direct measures of prices and wages--is clear that we are now in the vicinity of that line.

Thus, policies that foster more economic growth, if such growth is to be sustainable over the long run, should focus on aggregate supply. Aggregate supply depends on the size of the labor force and its productivity. Growth of the labor force basically is a function of increases in population and of individuals' decisions with regard to participation in the labor force. Labor productivity depends partly on the quantity and quality of capital and the overall efficiency in combining labor and capital in the

production process. Given projections of likely labor force expansion and capital accumulation, most estimates of growth in long-run potential real GNP fall in a range below the average growth rates of real nonfarm GNP experienced over the last couple of years.

Faster growth in real GNP would be possible for a time if we could use more of our labor and plant capacity without putting pressure on wages and prices. Monetary policy is not a useful tool to accomplish this. But microeconomic policies may well be, such as policies designed to improve the match between labor demands and supplies. Conversely, we must be careful to avoid approaches to our national needs that would add unduly to business costs or increase rigidities in labor and product markets. Perhaps most important over the long run, as the composition of production in the U.S. economy continues to evolve, we must intensify our efforts to educate our labor force to be productive in the increasingly high-technology world marketplace.

In addition, the United States could improve its longer-run growth prospects by stepping up the pace of capital accumulation. Government policies can contribute to a higher rate of investment. Tax policies can help by ensuring that returns from capital are not taxed excessively or unpredictably. And fiscal policy can help boost the national saving rate.

Ideally, increased national saving would involve some improvement in the private saving rate. Household saving is abysmally low in the United States, and business saving hasn't risen enough to offset that. However, it is not clear that past government policies have been very effective in boosting private saving. Probably the most direct and sure way of increasing saving is by a reduction in government dissaving. Congress should follow the Gramm-Rudman-Hollings timetable and then seek a budgetary surplus by the mid-1990s.

An improving federal budget position should have a variety of favorable effects. It can pave the way for a reduction in our external imbalance by freeing resources currently absorbed by domestic demand. By putting downward pressure on real interest rates, it can encourage domestic business capital formation and make housing more affordable. It can encourage households and businesses to focus more on the long run in economic planning.

Monetary policy also has a role to play in encouraging capital formation and economic growth over time, by providing a stable price environment. Although the relationship between growth of money and the economy can vary from year to year, over the long haul there is a close relationship between money and prices. Recently, the Board's staff has done some interesting research on this subject. This work indicates that future changes in the

rate of inflation have been fairly reliably linked to the difference between the prevailing price level and its equilibrium level. That equilibrium level is calculated at the current level of M2, assuming that real GNP is at its potential and velocity is at its long-run average. As you can see from the chart, inflation apparently tends to accelerate with a lag when actual prices are below the equilibrium value associated with current M2, and to decelerate when above it. This research suggests that despite relatively moderate expansion of M2 in recent years, the equilibrium value still is a little above the current price level, reinforcing the notion that the present risks are on the side of a pickup of inflation. This work also confirms that price stability ultimately will require somewhat slower M2 growth than we have experienced in recent years.

Financial Developments and Monetary Policy

The Federal Reserve recognizes that monetary policy over the coming year will be carried out against the backdrop of a financial system facing certain difficulties. The thrift and FSLIC situation is perhaps most pressing. The administration has proposed an extensive, workable plan for closing insolvent institutions, improving the regulation and supervision of S&Ls, and strengthening the deposit insurance funds. On Thursday, I will be presenting more detailed testimony on this topic before this committee. For

now, let me simply encourage you and your colleagues to take the necessary legislative steps to resolve this situation promptly. There appears to have been little, if any, effect of the S&L problem on mortgage availability and housing--thanks in part to financial innovation in the form of the mortgage-backed securities market. However, without quick and effective action the situation could deteriorate.

Developments in the corporate sector warrant close scrutiny as well. The stock market has been recovering over the past 15 months, with few signs as yet of speculative excesses. However, as you know, corporate equity continues to be retired at a startling rate in conjunction with LBOs and other mergers and restructurings and has involved issuance of a correspondingly large amount of debt. As I have noted in recent congressional testimony, this phenomenon is complex, having both positive and negative dimensions. These restructurings often have added economic value through improved efficiency--an important consideration given the increasingly competitive nature of world markets. But the higher leverage leaves these firms, and potentially their creditors, more vulnerable to financial difficulties in event of a downturn. The Federal Reserve and other federal regulators are instructing bank examiners to review especially carefully loans to highly leveraged firms in order to maintain a safe and sound banking system.

The international economy also will command the continuing attention of policymakers around the world. Among the industrial countries, greater concern about rising inflation followed the substantial economic growth recorded last year. Meanwhile, the process of adjustment of international imbalances appeared to have slowed somewhat in the second half of last year, and many developing countries continued to face serious problems of achieving sustained economic growth, fostering development, and servicing large external debts.

Some have argued that these financial stresses, taken together, could hamstring the Federal Reserve's anti-inflationary policy. Certainly we have to take account of the effects of our actions on all sectors of the domestic and international economy and on financial markets; at the same time we recognize that monetary policy is not the instrument to deal with structural financial stresses and imbalances here and abroad--and that attempts to do so may even worsen these problems. Backing away from policy adjustments needed to contain inflation will not solve the thrift problem, make the debt burden of heavily leveraged firms lighter, speed the process of international adjustment, or contribute to a fundamental solution of the economic problems of the developing countries. In fact, the thrift industry's problems, as well as the external debt problems of the developing countries, were exacerbated by

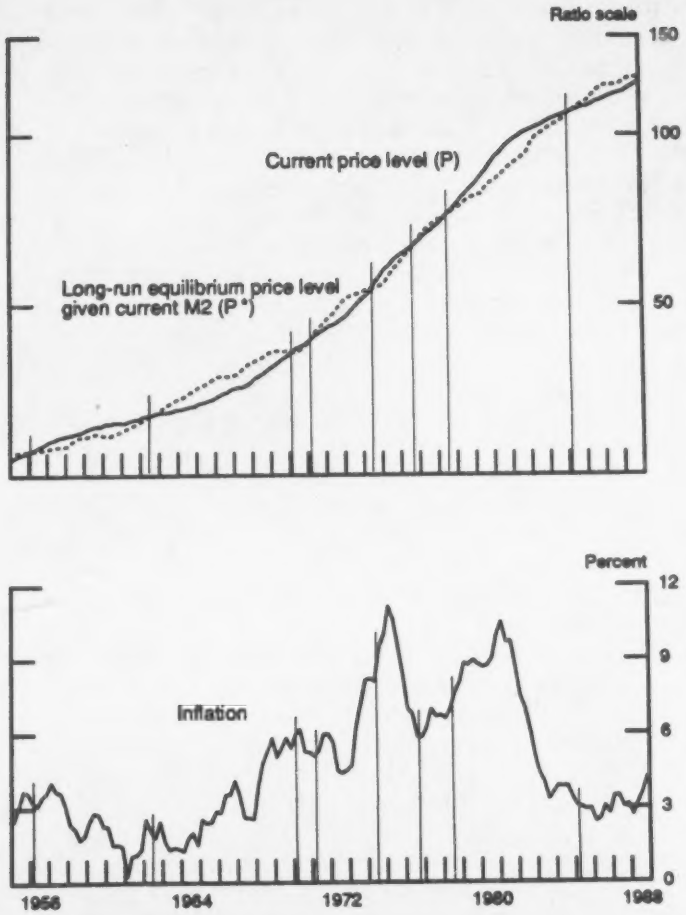
the inflation of the 1970s. Attempting to lower interest rates in the short run through more rapid money growth against countervailing market pressures would quickly raise inflationary expectations, leading soon to higher, not lower, interest rates. Instead, the structural financial problems require the prompt application of microeconomically oriented solutions within the supervisory, regulatory, and legal framework. Imbalances in the world economy require the continued, patient application of responsible macroeconomic policies in the United States and in other industrial countries, as well as further progress in economic reforms by the developing countries.

Conclusion

For its part, the Federal Reserve will continue to seek monetary conditions that will reduce inflation. Our major trading partners are following consistent policies in their own economies. Together, these policies should bring about a more stable financial environment and promote long-run worldwide economic growth. Relatively stable long-term nominal interest rates and flattening yield curves around the industrial world are strong evidence that savers and investors are in accord with this view. Monetary policy, at least for the moment, appears on track in the United States. The task is to keep it on track while making necessary adjustments to fiscal policy and reforms to the regulation

of financial institutions. In this way we can ensure vigorous and balanced economic conditions over the long run.

Inflation Indicator Based on M2



The current price level (P, the solid line in the top panel) is the implicit GNP deflator, which is set to 100 in 1982.

The long-run equilibrium price level given current M2 (P*, the dashed line in the top panel), is calculated as $P^* = (M2 \times V^*)/Q^*$, where V^* is an estimate of the long-run value of the GNP velocity of M2—the mean of V2 from 1955:Q1 to 1988:Q4—and Q^* is a Federal Reserve Board staff measure of potential real GNP.

The vertical lines mark the quarters when the difference between the current price level (P) and the long-run equilibrium price level (P^*) switches sign, and thus when inflation, with a lag, tends to begin accelerating or decelerating.

Inflation (bottom panel) is the percentage change in the implicit GNP deflator from four quarters earlier.

For more details, see Jeffrey Hallman, Richard D. Porter, and David H. Small, *M2 Per Unit of Potential GNP as a Price-Level Anchor*, Staff Studies (Board of Governors of the Federal Reserve System, forthcoming).

The CHAIRMAN. Thank you very much, Chairman Greenspan.

We have had Senators Mack and Wirth join us. I gather neither wish to make an opening statement at this time.

Let me now begin the question period.

In your official forecast of 1989 real GNP growth on page 3 of your document, you indicate that the central tendency of projections by you and the other Federal Reserve Governors and bank presidents is a growth rate somewhere between 2.5 and 3 percent. I note that among other forecasters, CBO is projecting 2.9 percent, and the blue chip private forecasters' consensus is 2.7 percent. So those two would fall within the range of what you describe as the central tendency.

I am concerned, however, about the fact that the administration for the purpose of building its economic forecasts and budget plan is assuming 1989 growth of 3.3 percent. That is well above and outside the central tendency range that you have indicated that you believe is the most likely.

Can you give us any understanding as to what accounts for the difference here?

I assume you have talked with the administration. They obviously see it one way and you and others see it a different way.

Can you shed any light on that difference?

Mr. GREENSPAN. Yes. First, Mr. Chairman, let me indicate that the differences between forecasts are not large in the context of the type of errors that we make as forecasters. There are differences. Their productivity numbers are stronger than ours. Their GNP is somewhat stronger.

I would say that ours is somewhat more probable than theirs, although we could have chosen a forecast closer to theirs. I think I would be doing the process of economic forecasting a disservice if I indicated that I know for sure that it is not a reasonable forecast to assume a growth rate higher than 3 percent. If somebody said we will grow 4 or 5 percent this year, I would say that is most unlikely.

But, frankly, Mr. Chairman, I don't think that the techniques that we have to forecast are sufficiently refined to argue strongly that the administration's forecast is outside the range of reasonableness.

The CHAIRMAN. You make a strong case for reducing the Federal deficit, and I agree with you 100 percent on that issue. But if it turns out that growth falls short of the administration's forecast, then the deficit goes higher.

Obviously, that starts to work its way back through creating pressures on interest rates and other things, and so getting the best estimate that we can make is critical to building a budget for this year.

Mr. GREENSPAN. I understand that, Mr. Chairman, but there is a very difficult problem that we have in this process because what an administration does when it brings forward a budget is to assume that the Congress will enact expeditiously that budget line by line exactly as it has proposed.

If that process actually occurred, I think there is significant justification on the part of the administration to assume they would have a somewhat stronger economy because, under those conditions, inflation expectations would fall rather significantly, as

would long-term interest rates, and it is quite likely that capital investment would accelerate above the path which it currently is on and certainly above the path which we project.

It is a very difficult problem which you have. It is a chicken and egg problem, and it is a process which, when I was on the other side as Chairman of the Council of Economic Advisers, I had difficulties with.

The CHAIRMAN. Let me leave that one for the moment with just this comment.

Obviously, it matters on how realistic the budget proposal is to start with. If it is unrealistic in a major dimension and is so seen by most experts and observers, then the growth rate that would flow from that also becomes not very realistic.

You don't do an interest rate forecast, and I understand why, but I think it is very important to get your judgment on the interest rate forecast that is also among the key economic assumptions that underlie the budget we are about to construct.

I read you before the 90-day Treasury bill projections running as follows—for 1989, first quarter, 8.3 percent; second quarter, 7.8 percent; third quarter, 7.2 percent; fourth quarter, 6.6 percent; and the first quarter of 1990 being at 6 percent and then the average for the full year 1990 being 5.5 percent. Those are awfully low rates, I think, relative to what we are seeing today, and it would be a very startling change over a short period of time from where we find ourselves literally this minute—are those realistic?

Mr. GREENSPAN. Mr. Chairman, as I said before, implicit in the administration's forecast, as I understand it, is the expectation of a fairly expeditious passage of the budget. I think they are correct to assume a significant decline in interest rates if that occurs. In other words, it is consistent with the approach which they are taking. I cannot comment on any of the individual numbers, but I have a considerable amount of sympathy for their overall notion that interest rates will fall significantly in that environment.

The CHAIRMAN. Let me just ask you this. Then my time will be up for this question period.

The 90-day bill rate at the moment is at what percentage figure?

Mr. GREENSPAN. It is 8.5 percent on a discounted basis.

The CHAIRMAN. Roughly 8.5 percent on a discounted basis, and we are now finishing the first quarter.

The estimate is by the fourth quarter we are going to be down to 6.6 percent. We are going to have a full 2 percentage point drop.

Is that realistic?

Mr. GREENSPAN. Mr. Chairman, I don't feel I can comment very specifically on individual interest rates. I would just like to reiterate what I said previously—namely, the key to the interest rate outlook in the administration's forecast is rightfully targeted on the deficit. I don't think that they or we know exactly whether it is too much or too little, and I would just as soon not get involved in trying to fine-tune the forecast.

The CHAIRMAN. Can you just tell me the last time that the 90-day T-bill was at 6 percent, going back in time?

[Pause.]

Mr. GREENSPAN. Preliminarily—we will check it—it has to go back to the late 1970's.

The CHAIRMAN. So it has been a full decade since we have had a 90-day bill rate as low as 6 percent, which we are now projected to meet within 1 year under the administration plan.

I think that is a startling projection and one that we ought to take a closer look at.

With that, let me yield to Senator Kassebaum.

Mr. GREENSPAN. I am sorry, Mr. Chairman. May I just have a moment?

It looks as though it temporarily got down to that level in the fall of 1986.

The CHAIRMAN. I take it for a very short period of time?

Mr. GREENSPAN. Actually, it carried through a good part of 1987. Unfortunately, I am reading from a chart.

The CHAIRMAN. At 6 percent?

Mr. GREENSPAN. Yes.

The CHAIRMAN. But you don't infer that that necessarily means that in the period of a year's time we are going to be back to 6 percent?

Mr. GREENSPAN. I had just as soon not respond to that.

The CHAIRMAN. I can understand why. [Laughter.]

Senator Kassebaum.

Senator KASSEBAUM. Chairman Greenspan, do you sometimes feel like the Oracle at Delphi? The markets of the world are hanging on every comment you make here or testimony?

I would like to ask you—you stressed a number of times in your statement the effect of wage and price increases. I would like to ask if you think any increase in the minimum wage would have an effect on the inflationary situation.

Mr. GREENSPAN. I don't think there is any question that increasing the minimum wage does have an effect on the overall wage structure, and to that extent it is something which, other things equal, would contribute to inflationary forces.

The decision the Congress has to make is whether or not the advantages received from that override what is clearly an element which does exacerbate the underlying cost structure of American business.

Senator KASSEBAUM. You mentioned three or four times at least in here that this is one of the main pressures building on inflation, and at some point I would guess then you would take that into consideration on what you would do with interest rates.

Mr. GREENSPAN. I wouldn't say that we, as an organization, would specifically focus on the minimum wage and take action as a consequence of that.

The issue is essentially why the underlying materials price increases were not reflected in comparable increases in final goods prices in the Consumers Price Index or even into the Producers Price Index, until recently. The reason is largely that unit labor costs, that is, the cost of labor per unit of output, were remarkably well-behaved.

These costs have taken somewhat of a turn in a worrisome direction now, and that is the reason we are particularly sensitive to the pattern of wage movements as they are a crucial element in the underlying cost structure of American business.

Senator KASSEBAUM. Do you see it having any effect on GNP growth if the minimum wage were to be increased?

Mr. GREENSPAN. I frankly would say that within the ranges which I have heard the minimum wage discussed the effect is modest. I mean, all economists will argue, I think quite correctly, that the effect of an increase in the minimum wage is to increase unemployment somewhat. That does mean that it probably slows GNP some, but I don't think the effect is large.

Senator KASSEBAUM. You spoke, too, several times to the task of the Federal Reserve is just simply stability, and right at the end you were talking about keeping on track and reforms to the regulation of financial institutions.

I would like to have you comment a bit further on that. Do you have some specific reforms, given your comment earlier about highly leveraged firms and the impact of that on the stability of the economy at this point, going beyond just the FSLIC problem?

Mr. GREENSPAN. I was referring to the implications of depository institution changes. I was addressing not only the FSLIC problem, but also review of Glass-Steagall issues, as I am sure this committee and the House Banking Committee will understand. Clearly the difficulties that we have with respect to debt resulting from the issue of LBO's, in my judgment, does require a longer run view of the balance of incentives to take on debt relative to equity.

It is not the LBO issue per se which pushed me in this direction. I think this is something which has been clearly on the agenda for quite a long period of time, and I believe at some point it would be appropriate for the Congress to address that question.

Senator KASSEBAUM. Do you think the value of the dollar should go any lower?

Mr. GREENSPAN. I think the group of seven, the seven major industrial countries, have done an extraordinarily good job, in my judgment, in keeping the dollar and most major exchange rates relatively stable for well over a year, and I think if we can continue that process we can contribute to economic growth not only in the United States but in the world as a whole.

Senator KASSEBAUM. And you have confidence that if we do that the pressures won't be such that we will see a further decline?

Mr. GREENSPAN. I think that we certainly are seeking continued stability in the dollar, and I expect that to continue.

Senator KASSEBAUM. Thank you.

The CHAIRMAN. Senator Wirth.

Senator WIRTH. Thank you, Mr. Chairman.

Mr. Greenspan, thank you very much for being here again. We appreciate your good judgment and stability at the helm of this extraordinarily important institution.

Let me ask you just a little bit so I can understand in layman's language what looks to me is going on.

You are concerned about a slowly increasing set of inflationary pressures. As a consequence, what you are doing is slowly calibrating the interest rates to try to dampen that down, is that right?

Mr. GREENSPAN. That is correct as a historical statement.

Senator WIRTH. Historical as opposed to contemporary? How does that relate to your current acts?

Mr. GREENSPAN. Well, I would say, as I indicated in my testimony, it is up to the current period. I just didn't want to imply a forecast.

Senator WIRTH. I have got it. Let me go on.

If in fact we are slowly but surely edging up in interest rates for the purposes of damping down inflation, the question then has to be asked, what the impact of increased interest rates could be on the other problems that we are trying to deal with.

This committee, as you know, is consumed with the S&L crisis and how we deal with that. It is consumed with the LBO issue and all of the controversy surrounding that, and also the Third World debt problem.

Now, is it fair to say that increased interest rates are going to make it more difficult for us to resolve the S&L problem?

I am not criticizing it in any way, let me say. I am just trying to understand what the ledger sheet looks like, what the balance sheet looks like.

Mr. GREENSPAN. The ledger sheet says that the higher the interest rates at any particular time, the more costly the resolutions of these various problems are.

One of the reasons why we embarked upon this type of policy is that we are seeking to suppress inflation so that it does not create a major acceleration in interest rates. It is the judgment of the committee—and I think it is a very good judgment—that our only alternative, when confronted with the type of economy we saw in 1988, was to try to suppress inflationary pressures and keep the interest rate increases relatively moderate. The alternative, to abandon that particular policy goal, would result in inflationary expectations rapidly embodied in long-term interest rates, driving mortgage interest rates and other interest rates up very substantially.

I would suspect—and obviously it is a difficult type of retrospective analysis to make—that had we not embarked on a tightening process throughout 1988 that interest rates today would be higher, certainly higher in the long end of the market, probably even higher in the short end, and that costs of the resolution of the various problems that we face would be substantially higher.

Senator WIRTH. The assumption is that you all can calibrate interest rates carefully enough so that you can slowly edge them up without throwing real crisis into the S&L's beyond where we are today or cause some of the fragility of various leveraged buyouts to get real problems because of increased interest rates. That is really the assumption, and that is the balancing act that you all are in, correct?

Mr. GREENSPAN. Yes. It is what we are endeavoring to do. It is not easy.

Senator WIRTH. That is the point that I am making, however. Let me ask the question.

Is there historic evidence to suggest that you can calibrate that carefully?

Mr. GREENSPAN. We certainly have in the Federal Reserve an extraordinary information and analytical capability. We have never confronted a situation that is exactly comparable to what we are in at this particular stage.

Senator WIRTH. Expand on that a little bit, will you, that we have never been in a situation like this?

Mr. GREENSPAN. We are in the sixth year of a major economic expansion with a crisis in the thrift industry which we have never seen. It is the largest financial problem that we have seen in the post-World War II period. We have a rather significant rise in the ratio of debt to equity, which is not only LBO's, and it has been going on for quite a long period of time.

It is an economic environment which, coupled with the very large trade and central government deficits, creates a set of circumstances that precludes us from looking at some historical period and saying this situation looks exactly like 1920, and then evaluate how it came out.

What we have to do is try to bring together what conceptual insights we have about these relationships, the extraordinary detail that we are able to draw on the economy from our 12 Federal Reserve Banks and other sources, and what I must say is a very quite remarkable, capable Federal Reserve staff, in order to try to devise those sets of policies which maximize our capability for bringing most of these problems to a successful landing.

Senator WIRTH. My time has expired.

I have great respect for the staff and what they are trying to do. What we have really identified here is really a high wire act that you are on at this point——

Mr. GREENSPAN. It is.

Senator WIRTH [continuing]. And that our economy essentially is on. We have never been in a situation that is potentially as unfriendly as this economic situation?

Mr. GREENSPAN. All I will say, Senator, is that we are acutely aware of all of the various elements that are impinging on what policies we take, and hopefully we will choose the right policies.

Senator WIRTH. We all hope so, too. Thank you very much, Mr. Greenspan.

The CHAIRMAN. Senator Gramm.

Senator GRAMM. Thank you, Mr. Chairman.

Chairman Greenspan, if you were a member of the United States Senate and you were deeply concerned about rising interest rates but you weren't on any open market committee and you weren't setting monetary policy, what would you do?

Mr. GREENSPAN. That is an easy one, Senator.

Senator GRAMM. I knew it was an easy one. That is why I asked it.

Mr. GREENSPAN. As I have said many times before, and as I said at the beginning of this testimony, in fact, I think that a significant cut in the Federal budget deficit is essential to resolve the type of problems which Senator Wirth and I have just been discussing.

It is clear to me that many of the problems that we are confronted with can be assisted in an extraordinarily positive way by a very expeditious and significant cut in the deficit. I am not one of those who believes that the process of cutting the deficit can be overdone. I don't believe that there is too large a cut that can be done, and I trust that the Congress will move with the administration in that direction.

Senator GRAMM. Let me ask you a question, and I am not trying to inject you into the very difficult policy decision that Congress has to make. That is a policy decision as to whether we want to control the growth of spending and limit the growth rate of spending to less than 3 percent above the level we spent last year, to achieve the deficit reduction targets by controlling spending, or whether we want to raise taxes so that government spending can grow by 7, 8, or 9 percent.

Let me just ask you from the point of view of looking at the economy, leaving aside any political factors. Just simply looking at what would be best in terms of maximizing our chances of sustaining the economic recovery, what would minimize the impact of rising—or minimize the chances that interest rates would go up enough to choke off the recovery?

Given the two choices between controlling spending and raising taxes, simply from the point of view of trying to sustain a recovery that has created 19 million new jobs, which of those two approaches to deficit reduction is preferable?

Mr. GREENSPAN. Senator, I believe I have said to this committee before, and I will certainly repeat it, that if the purpose is to get the deficit down you will have far greater success by focusing solely on the expenditure side.

Second, I would share your view that freeing private resources is more apt to create significant economic growth than endeavoring to close the deficit gap through increasing taxes.

Senator GRAMM. So let me go back and again pose the question and see if I can get you just to focus on it. You said it, but I want to hear it in terms of the question.

From the point of view of sustaining recovery and creating jobs, forgetting all the politics of the decision, would we be better off to control spending or raise taxes?

Mr. GREENSPAN. Control spending.

Senator GRAMM. Let me ask you a second question.

As I look at the credit market, one of the reasons it seems to me that deficit reduction is so critical this year is that we are getting ready to go out and borrow $50 billion as part of the savings-and-loan recapitalization program. So, if we meet the Gramm-Rudman-Hollings targets and reduce projected borrowing by $55 billion, in essence what we are doing is we are simply offsetting what is already occurring in dealing with the savings-and-loan problem.

Do you see it that way?

Mr. GREENSPAN. Not exactly, Senator, because I think that the markets already understand the size of savings-and-loan borrowing requirements.

Senator GRAMM. You're saying that is already reflected in current rates?

Mr. GREENSPAN. As best we can judge. It's already in the market.

Senator GRAMM. So that if we came in with a $55 billion deficit reduction package to the extent that that is not already in the market, that would have an impact?

Mr. GREENSPAN. Yes.

Senator GRAMM. As you look at the various projections that are made by CBO and OMB, how realistic is it to think that we might

actually stabilize interest rates and bring rates down by the end of the year if we pass a dramatic deficit reduction action?

Mr. GREENSPAN. I think it's very realistic.

Senator GRAMM. So, you are in essence saying when we vote on the budget, to the extent that we're voting for lower deficits we are voting for lower interest rates?

Mr. GREENSPAN. To the extent that the markets believe that what the Congress is doing is credible. That is an essential element in this whole equation. Then inflation expectations will fall because I think that the market has only very marginally discounted a significant decline in the budget deficit at this stage.

Senator GRAMM. Finally, do you think that we should do it quickly to get the full impact?

Mr. GREENSPAN. Yes, Senator, I do.

Senator GRAMM. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Greenspan, I want just to ask you one question as a follow-up to something Senator Gramm said before yielding to Senator Heinz. That is this:

He took you over two of the jumps. I don't know if he took you over the last jump, and I would like to take you over the last jump.

And that is, if it turns out that we are not able, the administration and the Congress together, to come up with enough deficit spending cuts to really get the deficit down to the targets because of a number of factors—the savings-and-loan problem, the drug war problem, the President's new initiatives on education and so forth—and if the only way to get to the Gramm-Rudman targets is with some revenue increase, would you favor that? Or do you think that has to be avoided at all costs even if it means missing the Gramm-Rudman targets?

Mr. GREENSPAN. Well, Mr. Chairman, I have said previously that if the negotiations fail, that I would favor going, as the law requires, to a sequester.

The presumption that the Congress will fail in its negotiations on this issue, I am not at this stage ready to make.

The CHAIRMAN. So, your answer is: Go the sequester route, but talk of increased revenue of any sort is really so counterproductive, as you would see it, that you don't want to even entertain the thought of it?

Mr. GREENSPAN. I would say at this particular stage without making judgments about the structure of the negotiations and where we are moving, that short of an agreement between the administration and the Congress I would find a sequester the next desirable step to take if we fail to get the most desirable outcome, which would be an agreement.

The CHAIRMAN. Let me pass the ball to Senator Heinz.

Senator HEINZ. Thank you very much, Mr. Chairman.

Chairman Greenspan, you are one of the best witnesses that ever comes before this committee. It's hard to disagree with your contention that if we don't have effective anti-inflation policies, that this will cause interest rates to rise.

Obviously, we want to avoid an increase in interest rates beyond where they are, and indeed we would all like, I think, to find a way, a set of policies, that will allow interest rates to decline.

I say that particularly because as measured by the Federal funds rate, I think we are probably at a historic high for the cost of those funds, which was as of last Friday 9.31 percent.

That is probably as high a premium over inflation as there has ever been. That is about a 5 percent, if you will, real interest rate.

Is that, to your knowledge, a historic high for the Federal funds rate since World War II?

Mr. GREENSPAN. First of all, let me just say this. The real interest rate is, of course, much lower than the market quote on the Federal funds rate, in the sense that that is the nominal interest rate. What reducing the deficit would essentially do is to bring real interest rates down.

That is essentially what is crucially and importantly required.

Senator HEINZ. I understand that. I just wanted to get a characterization of the current Federal funds rate as to whether it is, if your definition of a real interest rate is the nominal interest rate less inflation——

Mr. GREENSPAN. Inflation expectations.

Senator HEINZ. Isn't that so-called real interest rate at an all-time high, when you're looking at the Federal funds rate?

Mr. GREENSPAN. It was higher in the earlier part of the 1980's, depending on how one calculates it. The more important real interest rate in the context of economic activity is the long-term real interest rate, and that also was higher, as best we can judge, in the early part of the 1980's. It has come down some, but it is clearly still well above its average over a long period.

Senator HEINZ. Why, if the only time we can remember having a real interest rate as high as the early 1980's as we were going into a major recession, is our best previous experience with that, how is it that you feel confident that a similarly high real interest rate will not precipitate another significant recession?

Mr. GREENSPAN. First of all, Senator, the real long-term interest rate is still well below what it was in the early part of the decade. Even though that rate, for mortgages and other long-term instruments, has come up somewhat during the past year, it really has not come up a great deal, and as a consequence, both homebuilding and capital investment remain rather strong.

In that context, what we are seeing is an economy which is still rather robust.

Senator HEINZ. It seems to me that you can't argue this question both ways. If in fact the Federal funds rate, as you are saying, or other shorter-term interest rates are of relatively little consequence to the health of the economy, I don't understand how you can be successful in pursuing your strategy of demand management.

On the other hand, if you say that the more meaningful rates are the 30-year T-bonds, which have been in the range of about 9 percent for the last 1½ years and probably longer it seems to me that the market has been saying with great consistency that Fed's fears about inflation are ill-founded. How do you explain that?

Mr. GREENSPAN. I am not quite sure what the sequence is.

Senator HEINZ. The sequence in the latter part of the question is: if the market is a good predictor of inflation, if people are unwilling to lend their money for 30 years without adequate compensa-

tion for inflation and if the return to those people has been for the last year and a half roughly around or even below 9 percent and the only time it has moved up is as the Fed fund rate has moved up, how do you account for your fears of inflation if the market is saying those fears are overstated?

Mr. GREENSPAN. I think what the market is saying, if one interprets it in that respect, is that over the long term inflation expectations—meaning average expected inflation over a 10-, 20-, or 30-year period—have come down some, but that says very little about the short run, meaning 2 or 3 years.

You are raising a very interesting question: how do we in fact contain excess economic growth if what we do is deal in the short end of the market?

The answer is that long-term real rates have come up in the past year as we have tightened. Short-term real rates clearly have come up.

To answer your earlier question, the real; that is, inflation adjusted, 3-month Treasury bill rate in the early 1980's got up to about 7 percent. It fell all the way back down to about 2 percent, and is now back up to 4 percent.

But it is clear that the 4 percent is high enough in real terms to suppress inventory excess, which is a very crucial element in keeping the economy on a relatively stable path.

It is also true that we have not had a dramatic rise in long-term real rates. We have had some, but not a sharp one. What that is saying is that the rate is moving up to a level which is restraining. In other words, we are getting a level of rates which has slowed down the rate of growth in capital investment.

My impression is that if real rates were significantly lower, we would have a much stronger current capital investment environment.

The basic thrust of Federal Reserve policy is to try to keep a sense of stability in the markets and to try to take a posture with respect to rates and with respect to the growth in money and credit aggregates, which is perceived by the markets to be noninflationary over the long term.

Senator HEINZ. Mr. Chairman, I want to thank Chairman Greenspan for delving into what is one of the great ciracular questions of his job, which is: how do you keep the economy growing, interest rates low, and keep demand down so inflation is low. I don't envy him his job.

I would only observe that the increase in long rates that has accompanied the tightening by the Fed over the last 3 or 4 months obviously will make it harder for this country to engage in productive investment. That will make it harder for us to grow and reduce the budget deficit through growth. It will make it harder for us to build the capacity to displace imports. I think it is a very difficult and troubling question.

I am not here to judge whether your policy is a little high or a little low. But I do worry enormously about the consequences of your having to pursue, perhaps for very good reason, a policy that at the present time would be, by your own admission, working against our ability to improve our productivity and international competitiveness.

Mr. GREENSPAN. If I may just say very quickly, Senator, that is the reason why we have argued so strenuously for quick action on the budget question because the simplest way to bring real long-term interest rates down is by bringing the budget deficit down significantly.

Senator HEINZ. Are you trying to make us an offer we can't refuse?

Mr. GREENSPAN. Sure enough.

The CHAIRMAN. Thank you. That was a very useful exchange, and I think it bodes well for the record.

Senator Graham.

Senator GRAHAM. Mr. Chairman, I have an opening statement that I would like to file for the record.

The CHAIRMAN. Without objection.

OPENING STATEMENT OF SENATOR BOB GRAHAM

Senator GRAHAM. Mr. Chairman, it is a pleasure to have Chairman Greenspan report to us today on the conduct of monetary policy. As Chairman Greenspan has stated in the past, monetary policy alone cannot provide the answers to our economic problems. We need complementary fiscal and trade policies, and we need to coordinate these policies with the approaches of the administration, our trading partners and the Congress.

Chairman Greenspan, it has been said that the Federal Reserve finds itself between a rock and a hard place when a discussion of interest rates takes place. Some people, such as yourself, are concerned about inflation moving up; others are concerned about a slow-down in the country's economic growth. Raising interest rates keeps inflation under control. However, the administration is predicting lower interest rates to help reduce the budget deficit. As The Economist quotes,. "Mr. Greenspan, having to run America's monetary policy between the rock of an intractable budget and the hard place of market skepticism, often has an equally tricky job persuading his Fed colleagues to unite."

Higher interest rates impact our savings and loan problem as well as the Latin American debt crisis. The Fed in the past has been successful in lowering interest rates as well as inflation. This has helped reduce the crushing interest burden on the debtor countries. If interest rates rise, these debtor countries are put in a more tenuous position. As to the savings and loans, higher interest rates also adversely impact them, as they try to compete against institutions paying higher interest rates for funds.

Mr. Greenspan, it is a difficult time. We look forward to your comments this morning.

Thank you, Mr. Chairman.

Senator GRAHAM. Mr. Chairman, when you appeared on July 13, we talked a bit about the question of U.S. policy as it relates to Third World debt. I believe I characterized your statement at that time as basically advocating a continuation of the policy that was then in place.

The new administration has indicated a willingness to reopen the issue and has indicated that there might be some revision to that policy.

From your perspective, what do you recommend now should be any new directions in the United States leadership relative to Third World debt and Latin American debt?

Mr. GREENSPAN. Senator, as a result of the President's request to review that policy—that is, his own review under the leadership of the Secretary of the Treasury—we at the Federal Reserve are obviously participating to the greatest extent that we can. I cannot at this stage indicate how the review is going to come out.

I think it is clearly going to continue to emphasize the necessity of the sound economic policies on the part of the debtor nations, international economic cooperation, the appropriate means of financing, and presumably will have some focus on the issue of debt reduction.

The specific details will be presumably announced within a reasonably short period of time.

Senator GRAHAM. One of the criticisms of the debtor nations has been that the United States regulatory policy relative to its commercial banks has been less forthcoming than has been the case in some of the major European creditor countries. Do you think that is a fair characterization?

Mr. GREENSPAN. It's a very complex question because regulations are difficult to fully understand with respect to their implications in all regards. I suspect not because I don't think that we see any material problems emerging from our regulatory structure.

As far as the resolution of the LDC debt problem is concerned, it's not that there are not problems. We just do not believe that there are regulatory changes which are going to make a large difference.

Senator GRAHAM. The review of policy that is under way which may lead to revision, what do you think should be the standards by which U.S. policy relative to Third World debt should be evaluated over the next 5 years? What would be the conditions within this country, within other creditor countries, and within the debtor countries, in 1994 that would lead you to say we have been successful in the policy directions set and in our pursuit of those directions?

Mr. GREENSPAN. I would say first, Senator, that the economic policies of the debtor nations brought them back to access to the financial markets on a voluntary basis. It's clear that a number of countries could, at this stage, float in the Euro bond markets, but they would be at interest rates which would be so high that the debtor countries would have difficulty servicing the debts.

So, the first criterion of success would be the ability of nations in debt to be able to get into the markets for long-term or intermediate-term borrowing at rates which they could readily service.

Second, what I would see required as a corollary to that is a restoration of the normal borrowing-lending relationships between the debtor nations and the international commercial banking system.

If you get one, you will clearly get the second. That will create a situation in which the large block of loans on the books of the international commercial banking system would be a good deal more valuable than they are today.

Finally, what we would want to see would be that some of the debtor nations which have done better than others, that have been,

in a sense, contaminated by the whole process—such as Colombia, for example—find that their productive efforts get fully appreciated in the marketplace.

Senator GRAHAM. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you very much.

Senator Mack?

Senator MACK. Thank you, Mr. Chairman.

It's good to see you again this morning. I am delighted to have the opportunity to raise some points with you.

I wanted to follow up on the suggestion that if we were to substantially or significantly reduce the size of the deficit, there would be the possibility of a fairly significant reduction in interest rates.

You indicated, I guess, that that would be helpful the earlier that could be done, but if we didn't do it earlier, your kind of second suggestion—or maybe that was said for you—is that a sequester would be helpful.

I guess I am wondering, if we went through this whole process and didn't come to an agreement between the executive and the legislative branch as to what kind of deficit reduction plans should be put together and a sequester went into place, would that be sufficient to allow for the possibility of significant reductions in interest rates?

Mr. GREENSPAN. First of all, I think that we have to distinguish between the processes which the markets will perceive as permanent change and those which they may not.

Clearly, an agreement between the administration and the Congress will carry forward not only into the fiscal 1990 budget, but also, because of the follow-on effects of any agreement, into the 1991 and the 1992 budgets.

I am not clear to what extent a sequester will create that type of effect. It will clearly be positive.

Senator MACK. Let me just kind of throw out a couple of thoughts here. One thing it would do, it obviously creates a lower baseline for the following year, which would be an advantage.

Mr. GREENSPAN. That's correct.

Senator MACK. No. 2, it would be a statement on the part of the Congress that we were willing to allow the sequester to go into effect rather than to relax the Gramm-Rudman targets, which I would think, if those two things would occur, would be a fairly significant signal to the markets.

Mr. GREENSPAN. I don't think there is any question that if the Gramm-Rudman targets were relaxed as a means of resolving the impasse that the markets would view that rather negatively.

Senator MACK. Let me see if I can follow on with that.

A little bit earlier, you implied—or I think specifically said—that from your viewpoint that the markets had already taken into consideration the cost of the FSLIC problem.

What do you think the markets have done with respect to what they think we are going to do with respect to the deficit?

Mr. GREENSPAN. It's a difficult question to answer. My impression is that there is a dubiousness out there which is very difficult to measure. That is the reason I say that should the deficit be reduced materially—and when I say reduced, I don't mean only for

fiscal 1990, I mean projected forward—a goodly part would be unanticipated and would affect real interest rates.

The problem I think we ought to focus on, however, is to distinguish between the Gramm-Rudman targets on the one hand and the actual outcomes on the other, because the targets are for essentially the beginning of the fiscal year.

Obviously, if one says that the target of $100 billion is met, that is not the same thing as saying that we have guaranteed that the deficit after the fact in fiscal year 1990 will be $100 billion.

As I have said in other committee hearings, my impression is that if the market knew for a fact that the actual as distinct from the targeted deficit would end up somewhere between $110 billion and $120 billion after the fact, as of the close of business on September 30, 1990, then I think the market would take it as a significant improvement. And I think that interest rates would fall from current levels as a result.

Senator MACK. Let me take you to another area.

I, from your testimony, drew the implication that we need to be addressing capital formation in this country. I would just like for you to respond as to what impact, if any, you think would result from a reduction in the capital gains rate, as has been proposed.

Mr. GREENSPAN. I have always been in favor of a lower capital gains tax rate. It would enhance capital investment, especially in the small business sector of our economy.

I would not, however, be supportive of the cut if it became part of a deal to unwind what I think were very important benefits in the Tax Reform Act of 1986—namely, the significant lowering of the marginal tax rates for all taxpayers.

That to me was a very major event, and I would not like to see us unwind what was then an important bipartisan compromise.

Senator MACK. Let me just, if I could, restate what I think I heard you say. In other words, you would not accept, let's say, a compromise which said, well, we will lower the capital gains rate but we are going to offset that lowering by raising marginal rates to compensate for what everyone agreed to was going to be the loss of revenues as a result, which is a debatable point.

So, you would not make that trade?

Mr. GREENSPAN. That is correct, Senator. I would not.

Senator MACK. But you do believe that the capital gains rate would assist in capital formation, lowering of the capital gains rate?

Mr. GREENSPAN. Yes, I do.

Senator MACK. Thank you, Mr. Chairman.

The CHAIRMAN. Senator Pressler?

Senator PRESSLER. Thank you very much.

Welcome to the hearing.

Following up on Senator Mack's question about capital gains, I have been trying to figure this situation out. I believe the President's economists say that lowering the capital gains tax rate would actually increase revenue to the government, while I think the Congressional Budget Office is about to suggest or has suggested that it would decrease revenues to the government.

Let me say that I am not arguing the point here. But what is your judgment of that question? Am I correct, are there different

respected economists who have reached different conclusions on that?

Mr. GREENSPAN. Yes. Estimating the revenue effects of the change in the capital gains tax rate is one of the most difficult procedures that economists have to deal with so far as economic policy is concerned. The reason is that very small changes in the degree of what we call the "lock-in" of capital gains—people not selling assets—has very large effects on revenues.

So, it is perfectly conceivable that two equally competent tax revenue analysts can evaluate the President's proposal with rather dramatically different results. There is no question that the Treasury Department's estimates are credible. The assumptions are not outlandish.

The problem basically is that it is very difficult to make those types of judgments. So, I think it's a difficult call.

Senator PRESSLER. As a general rule for this discussion in layman's terms, they say that if capital gains taxes are higher, rich people put their monies into art, antiques, and things like that, but if they are lower, they will put them into job-creating business activities.

Is that a true statement?

Mr. GREENSPAN. I think it's difficult to say. As I understand the President's proposal, he is eliminating artifacts and the like in his proposal and is essentially focusing on areas that will spur capital investment.

The impact of changes in the capital gains tax rate has been argued at extraordinarily great lengths for years. With respect to just the type of question you raised, Senator, I just want to say the battle has not been won by any side, of which I am aware, and is likely to continue for quite a long period of time.

Senator PRESSLER. So, you don't have a clear position on the capital gains tax issue. You would like to see it lower, but you wouldn't want to see us tackle that, opening up the tax question again? In general, your recommendation is to leave it alone?

Mr. GREENSPAN. No, I would like to see it lowered, but not if it causes an offsetting rise in the marginal tax rates for individuals.

Senator PRESSLER. Moving to another area—and again, you've covered this somewhat—but I want to focus in. I had 16 town meetings in my State last week, and I was trying to explain this but was unable to do so with certainty.

Aren't the savings-and-loan bonds that are proposed to be issued—$50 billion of obligations or however we're going to handle it—part of our national debt? And I agree with you, I consider the deficit the number one domestic problem, and trust my voting record reflects that.

But, from your point of view, isn't the adding of that debt in the aggregate whether it's off budget or on budget or however it's handled, isn't that essentially adding to the national debt, which is doing just exactly what you don't want to see us do?

Mr. GREENSPAN. There is a difference, Senator. And I think that the crucial question is more the one of getting the deficit down than being overly concerned about the level of outstanding public debt either on budget or off budget because it is essentially the net claim on savings that is directly related to the deficit and which is

the crucial reason why the budget deficit is so corrosive a force in the economy.

The difference between that and a one-shot solution to the savings-and-loan problem is that whatever it costs, it is nonrepetitive. By that I mean that it does not affect either revenues or expenditures over the long run, or affect the budget deficit materially in the year, say, 2000, whereas anything that is done with respect to changing the structure and trend of receipts or expenditures in the regular budget will affect the long-term budget.

Savings-and-loan financing, irrespective of how it's done, is a one-shot effect and does not materially affect the long-term outlook for the budget deficit.

Senator PRESSLER. I couldn't agree with you more concerning the budget deficit. And we all must work together on it. But at some point someone, a respected national economist such as yourself who has the pulpit, so to speak, is going to have to outline where those cuts are going to be taken.

The President gave his State of the Union Address, and in terms of an opportunity for leadership in this area, do you feel the President sufficiently addressed the budget cut issue in that speech?

Mr. GREENSPAN. Considering he was in office for so short a period of time, I thought that the Office of Management and Budget put together a rather substantial budget. Whether it is adequate for the purposes of the negotiations that you are currently involved in is really not for me to say.

All I can tell you is, having seen how much work was put in, it was rather impressive. The issue of whether it is adequate, I think, will be determined very shortly.

Senator PRESSLER. Mr. Chairman, might I ask one more question here?

The CHAIRMAN. Please do.

Senator PRESSLER. Are agriculture and small business more sensitive to interest rate changes? Are some sectors of the economy more sensitive? I get the feeling, listening to my small businessmen and women, that they are extremely sensitive to interest rate changes. Would you consider that sector to be more or less sensitive to interest rate changes?

Mr. GREENSPAN. I think it's a mixed bag. It depends on the nature of the leverage. It depends on the nature of the alternative means of financing. I think interest rates affect both big and small business and farmers.

I think they affect everybody, but the effect depends on the degree of leverage in any individual firm or industry. I would not want to argue that it's a significantly greater factor in small business or agriculture, with the exception that specific aspects of debt in agriculture and some small businesses do make them more sensitive, but it is not basically because they are small businesses. The cost of capital to small business for both equity and debt is higher than for larger, basically seasoned businesses. But the cost of capital is a bigger issue for small business in general. I wouldn't say interest rates per se necessarily are.

Senator PRESSLER. In my town meetings last week, in 16 South Dakota towns, I would say that somehow keeping interest rates down was almost a bigger issue than the farm bill or anything else.

I know it's tied to the deficit and I know it's tied to a lot of things, but an increase in interest rates is really on people's minds out there.

The people I talked to were mostly farmers, small businessmen, people who come to public meetings. So, I am very interested in what you have to say and what you and your colleagues do.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Pressler.

I just want to make an observation on your second-to-last question and the Chairman's response in terms of where the cuts might be made. And I think the new administration was very ambiguous in that area, and I think Senator Pressler's question is exactly right.

When you said they haven't been here very long, in a sense they haven't. But George has been here for the last 8 years. So, in fairness, with respect to the problem of deficits and cuts, he is not a stranger to this issue.

I am concerned because I think there is a side step going on here generally, because of the difficulty of reconciling all of the particular problems.

One of the things that you have mentioned today and will talk about 2 days from now when you come back is paying for the savings-and-loan problem. If we were direct about it, if it's been discounted by the markets, which I thought I earlier heard you say then why shouldn't we finance it at the lowest possible cost to the taxpayer? Why shouldn't we go out and raise the amount of money we need with a direct kind of borrowing that gets the interest rate costs down to the lowest level?

Mr. GREENSPAN. Mr. Chairman, may I address that on Thursday because it requires a much broader answer than I think we would want to discuss today?

The CHAIRMAN. We can take it over at that time. But I don't think that we should put contradictory ideas on the table today and not make some effort to reconcile them.

We shouldn't say on the one hand that we want to reduce the deficit and be honest about the numbers and on the other hand use an off-budget means of financing, particularly if we have to pay a premium interest cost for doing so.

Mr. GREENSPAN. The reason I would prefer to hold until Thursday is that I think I would like Secretary Brady to make his presentation on the full details of his program before I discuss some of the details.

The CHAIRMAN. I won't press that issue now.

Let me go back to something else you said earlier. You were citing the unique buildup of circumstances that you find today—the crisis in the thrift industry, the significant rise in the ratio of debt to equity out in our private sector, the large continuing trade and Federal Government deficits, the fact that the expansion has gone on for historically now a very long period of time, and you have created in that description a set of elements that are unique and that really pose some dangers to us if we don't deal with them directly.

I think you clearly felt that way and made that impression. And I am inclined to agree with you. I think that as we look at these

things—the LBO's and everything else—we are in an unprecedented situation and the time to act is now. We are at the beginning of a new administration. There is a new Congress. We should all step up to the responsibility of acting. And presumably we can put a strategy in place which starts to adjust us through this whole set of problems.

I say all that by way of getting to this question:

You have lived a long time in the world of national and international finance. When you add those issues together in terms of the kind of threat or risk they present to us if left unresolved, how serious a mixture of problems is this?

I think that Congress needs to understand and the public needs to understand exactly the dimension of the risk.

How urgent is it that we act on these things? Do these in combination constitute something that would be an 8 on a scale of 1 to 10 in term of the overall urgency and risk that they present to us? Or are you talking about something that is down in the 5 range or the 3 range? Where are we exactly?

Mr. GREENSPAN. The truth of the matter is, Mr. Chairman, that——

The CHAIRMAN. In your judgment.

Mr. GREENSPAN. No one really knows, and can't know. We are dealing with degrees of complexity that anyone who gives you a definitive answer to that question is expressing a degree of ignorance, not insight.

It's clear that if one evaluates the various risks and if there is enough of a concern that the risks could be large, then it very significantly skews policy toward reducing the budget deficit and making certain that inflation does not accelerate and create very significant additional imbalances in the system.

I think the reason I addressed the issue or the question that Senator Wirth raised earlier in the way I did is that what we have got is a rather complex structure of problems. What we cannot impose on them is a renewal of inflation and expect that they will somehow be resolved. They won't. That we know with a high degree of assurance.

How these elements in the financial structure—the debt question, the trade deficit, the thrift issues—how they all will come out is difficult to say. But we do have the capability of resolving them all. It is not a 1-shot-in-20. We've got a much higher probability than that. We can resolve the LDC issue.

The CHAIRMAN. If I may just interrupt there. I agree with you that we can solve them. But I am really asking you to reflect on a different question. And that is, suppose we do not resolve them. They are very difficult to resolve.

If you feel it's important not to let this buildup of situations just run on and just drift along without some very serious resolution of these problems, that we may be facing risks of a dimension that we have not seen in a long period of time, now is a good time to let everybody know it.

Mr. GREENSPAN. What I don't want to convey to you is more than I know. I am not saying in effect that we have to resolve the budget deficit issue within the next 6 weeks or 2 weeks or 2 years. I don't know the answer to that.

What I do know, however, is that the longer we wait to resolve it, the greater the risks to the system. What I am saying is that because of the size of the problem what could happen if we fail to address these problems appropriately is of such an order of magnitude that we should not hesitate to resolve the budget deficit problem.

The CHAIRMAN. What are those risks?

Mr. GREENSPAN. Well, let's assume we do not resolve the budget deficit question, I would say we'd have a significant acceleration of inflation in this country and a very considerable set of imbalances which would lead to a major contraction.

The question which I cannot answer—does that mean we have to resolve it immediately? I don't think so. I do think we have a little time, but I don't think we have time to procrastinate and hope it will all go away, because I don't believe it will go away.

I must say I am somewhat optimistic, knowing the players, that it will get resolved. But I am saying that we cannot take the chance of not resolving this problem.

The CHAIRMAN. When you said a little time, I gather you're thinking in terms of months and not years?

Mr. GREENSPAN. I mean I cannot say to you that if th hing drags on and we eventually resolve it some time early next year, that that is too late. I frankly don't know. I would feel uncomfortable about doing that. But I don't know enough, nor does anybody have the knowledge, to make that judgment.

The CHAIRMAN. I am not asking for precision, because, as you say, none of us has it. You know, you are a person with very highly respected professional judgment. You are probably in as good a position to make an overall professional judgment as any person we might ask. So, I think given that, I think it's fair to ask about the degree of risk we run here if we should not step up to these things and resolve them in some rather decisive way.

Mr. GREENSPAN. I would say the degree of risk of allowing this whole process to fester is unacceptable.

The CHAIRMAN. Senator Pressler?

Senator PRESSLER. I just wanted to get in there because I agree with you that it is such a severe problem, but I see us going through the same cycle up here as we have gone through—and I have been here for 14 years—somehow, and I say this in the background of just having returned from going all over my State.

Somehow we need a presidential speech on where to make the cuts or what to do about this budget deficit. We need some kind of national position by people such as yourself because each Member of Congress, I can give a speech in my hometown and 100 people will listen to me—and I have a plan, which I won't go into here—but the point is that by the time we get through—but I would like to embrace a presidential plan or something of that sort. But we really haven't had that explained to the American people.

Everybody tells Congress, "You've got to cut the budget." We all agree. Everybody agrees we've got to have a balanced budget. We all agree. But we haven't really. Somewhere I think we are crying out for a national focus of somebody who can explain this thing, rally support nationwide and so forth.

It seems that everybody is kind of passing the buck to everybody else. That is what is the tragedy of the current situation as far as I can see it.

Is my analysis correct, or would you disagree with that?

Mr. GREENSPAN. I am a good deal more optimistic than you, Senator. I think that this country, when it comes to the necessity to do something, has historically done it. While I can abstractly discuss the various outcomes if we don't do anything, I frankly and honestly don't believe it's going to come out that way.

I do think that we understand what has to be done, and it's not that great a change. Some less developed countries have undergone types of adjustments that are far greater than any that we have to make, so I can't honestly tell you that I think we won't resolve all the problems because I really believe that we will.

I think there will be a good deal of political negotiation and friction, but in the end I am reasonably certain that we will all come together with the appropriate policy.

The CHAIRMAN. Senator Pressler, you are next in order, and then I am going to go to Senator Graham.

Senator PRESSLER. I don't have any further questions.

The CHAIRMAN. Senator Graham?

Senator GRAHAM. I would just like to add to the comments made by the Chairman and Senator Pressler. I agree the President has an opportunity and, I think, a national responsibility to be specific as to where he thinks our Federal fiscal policy should go.

For example, there is tremendous concern among Americans in the age group 25 to 40 as to whether some of the basic support system such as Social Security and Medicare are credible for them.

I believe that part of solving the budget deficit is to give some degree of assurance to Americans as to basic Federal financial commitment to programs on which people are basing a substantial amount of their lifetime planning.

Early in President Reagan's administration there was a lot of discussion about the issue of new Federalism, a sorting out of domestic responsibilities among levels of Government.

I think there was a great deal of wisdom in that effort, which is sort of dissipated. I believe those are two areas in which presidential leadership on more than just that we need to reduce the budget but also what are some longer-term objectives in reducing the budget would be very positive and would help to build a national coalition behind the tough decisions that the Chairman has indicated we will have to make.

If I could move to another subject that we have already discussed somewhat, and that is the capital gains issue.

On page 11 of your statement there is a paragraph which indicates your basic support for capital gains reduction. And I appreciate the further amplification that you have given.

Assuming that the overall budget issue is such that that is a matter that could be seriously considered, what would be your recommendation as to the shape of a capital gains policy?

Mr. GREENSPAN. I thought the President's proposal was a sensible proposal. In other words, it was a good way of structuring the proposal. I think if it were enacted, it would have a positive effect.

There are different ways in which one can alter the capital gains tax, but I thought that proposal was a sensible one.

Senator GRAHAM. Let me ask, would you favor a longer holding period than the 6 months which was applicable when we last had capital gains; and if so, would you favor a tiered holding period where greater tax benefits accrued to longer periods of ownership?

Mr. GREENSPAN. It depends on the rate, Senator. In general I would have some sympathy for that sort of a proposal.

Senator GRAHAM. Do you have any suggestions as to what the relationship of rate to holding period might be, or how do you go about thinking through reaching the numerical answer?

Mr. GREENSPAN. Senator, years ago I studied the issue in great detail, and had very specific conclusions with respect to that question. But I have not been in touch with the numbers in the last several years to a degree to which I would feel comfortable in giving you such a response.

Senator GRAHAM. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Senator Graham.

Just a few other things to cover, Chairman Greenspan, today.

We have been talking about meeting the Gramm-Rudman-Hollings targets. There are some of us who feel that is an honest discipline. There are some of us who feel it is an inherently dishonest accounting discipline, the way we do it.

For the fiscal year we are now doing the budget for, we are going to borrow $68 billion from Social Security.

The regular general Government is going to borrow $68 billion out of Social Security, give the Social Security fund a series of IOU's, and we're going to spend the money on the day-to-day operations of government. Some of it goes to the Defense Department. Some of it goes to the FBI. Some of it goes to the drug war and so forth. And it will be spent.

The general government will, in effect, owe the Social Security that money that it has borrowed and will have to pay it back some time in the future.

As I track this through in my own mind, it seems to me what is happening here is that individuals who are paying into their Social Security taxes each day, as I do and you do, are finding out that the money they are putting in that is supposed to be there to pay their retirement benefits in the future is being borrowed, taken over into the general area of government, being spent every day as part of the way to make the deficit look lower than it really is, and in the future that money is all going to have to be replaced. It has got to come from somewhere. It has got to be taken from the general government and sent back over to Social Security to pay those benefits in the future when it is time for people to receive them.

Now, the actual operating deficit of the budget is about $250 billion at the present time if you take out the Social Security surplus and the other trust fund surpluses.

How can we continue to do that? We say one thing in terms of what the deficit figure is, but in cold point of fact the real operating deficit is about $100 billion larger.

Do the financial markets of the world just take this in stride, this accounting trick? Are they comfortable with it? Can we just do this indefinitely?

Mr. GREENSPAN. I think what the financial markets do is to recognize that there really is a single Federal Government deficit, what we call the unified budget deficit, and that the issue of various trust funds are merely assumed to be consolidated in the system and essentially involve intragovernmental transfers.

If we wished to create a significant amount of saving and therefore real investment which generated an increased degree of productivity, which therefore supported the fund from which in real terms Social Security beneficiaries were paid off, then I think we would have to deal with the Social Security trust fund as though it were a separate organization investing in private instruments and in a sense independent of, as you put it, the operating budget.

When one looks at the question of the overall government, both Social Security and all other, the crucial issue of total U.S. savings, must be seen in terms of the unified deficit because if the total budget, unified budget, goes into surplus because the Social Security surplus is larger than the operating deficit, that creates an increase in total domestic saving for the United States, which is in my judgment crucial to the long-term problem.

The CHAIRMAN. Let me ask you this. That is, precisely what the Social Security fund is supposed to be. It is supposed to be a savings fund; that is, you put the money aside, you invest it presumably in earning assets, and so the capital is safe. The earnings build up, and the money is there to pay benefits in the future. You collect that tax for a dedicated purpose.

But what we are doing now is to take that money and spend it on the daily operations of government. I don't really understand how you can justify that.

Would you be untroubled if, when the Social Security surpluses get up to, say, $200 billion a year, that we take it all and spend it on the daily operations of government and feel that somehow or another we are not putting ourselves in a terrific problem for the future?

Mr. GREENSPAN. Actually, in a certain sense, Mr. Chairman, the problem is even worse than that because to the extent that special issues are issued by the Treasury to the Social Security Administration, interest is paid on that. That interest becomes a very large number. My recollection is that by the turn of the century, by the late 1990's or the early 2000's, the intragovernmental interest payment from the Treasury to the Social Security trust fund is about 1 percent of the GNP, which is a very large number, the equivalent of $50 billion today.

That means that the outlays for the non-Social Security part of the budget must include those interest payments to the Social Security trust fund and a substantial part of the very large surplus that is building in the Social Security trust fund reflects the build-up of intragovernmental interest payments.

When we see in our calculations that, on the one hand, Social Security annual surpluses are going up like that and non-Social Security deficits are going up like that, both are very significantly affected by the same factor, which when we consolidate the accounts into the unified budget wash out as intragovernmental transfers and we never see it.

The CHAIRMAN. Don't you think the time has come for us to stop using the Social Security surpluses as a way to make the deficit look smaller than it really is? Shouldn't we get down to the hard job of dealing with the true in-flows and out-flows of the general government?

Mr. GREENSPAN. I don't disagree that would be useful to do that, but there is an important distinction in that the unified budget does have a certain meaning, and I think it is a useful concept because even if you segregate Social Security and were you to invest the proceeds in private instruments, combining the two is the measure of what the government is doing.

The CHAIRMAN. I don't argue with that. But the cold fact of the matter is that we are running a much bigger operating deficit today than anybody wants to admit.

You talk about the size of the interest claims in the future being enormous, and they will be. But the interest payments are exceeded by the principal. We are actually increasing the principal each day. You are nodding in the affirmative, and I want to make sure that that shows up on the record.

This is a brand new development. Before the last 2 or 3 years we were not running these large surpluses in the Social Security fund.

What has happened here, it seems to me, is that we are engaging in an accounting trick. We are going over and borrowing it, and we are using it to make it appear as if we are reaching these Gramm-Rudman targets on an operating basis when in fact we are not. We are off by about $100 billion.

I really think it is dishonest. I think it is one of the issues that we ought to be facing right now in the first half of 1989, and I see a side step—I don't say by you going on because we have got a comfortable way to make it appear that we are hitting the Gramm-Rudman-Hollings targets when in fact we are not, not without, in a sense, looting the Social Security reserves and spending them each day on other purposes.

It is very frustrating to see that because when you throw that back in on top of your list—a crisis in the thrift industry, the significant rise in ratio of debt to equity, the large trade and central budget deficit—and I am just quoting from your comments as I wrote them down when you made them earlier—it seems to me that the time to be very hardboiled about it is right now.

It seems to me that you made a case here in an understated way today that this pile-up of difficulties has taken us to a level of risk that we haven't seen maybe since the 1930's. We don't face them honestly and start to resolve them quite quickly, not tomorrow morning but on an accelerated time frame.

That is my interpretation of what I think I hear you saying today.

Mr. GREENSPAN. I am concerned, Mr. Chairman, but as I said earlier, I have enough confidence in the way our system functions to believe we will resolve these difficult questions as we have resolved questions in the past, and I think the willingness of the Congress to address those issues as expeditiously as apparently it is and with the seriousness of purpose which I infer from the attitude of the President and the key members relative to this whole process, the thrift problems and budget deficit problems to take two

major issues, I must say gives me a degree of confidence that we will come out in a manner which will be the type of resolution which will make restoration of balance in the system something which is quite achievable.

The CHAIRMAN. We are going to work to accomplish that in every way we can.

I want to raise one other thing, then yield to Senator Graham, and that is this.

The Finance Minister of West Germany is quoted by Reuters on the 16th of February as saying that "The U.S. Federal Reserve now estimates U.S. 1989 inflation at 6 percent rather than 5 percent," and he went on to note that inflation was pressing upon other countries. In Britain it was 7 percent. In Italy it was approaching 6 percent. In fact, he was noting an increasing in inflationary pressures in West Germany.

Where does that figure of 6 percent that he cites as being attributable to our Federal Reserve come from?

Mr. GREENSPAN. I frankly don't know, Mr. Chairman. It is possible that I may have inadvertently misspoke in conversations with him, or one of my colleagues may have. It is not an official figure, nor is it any figure that we have internally in our staff operations.

So it is likely that I or one of my colleagues misspoke and didn't get corrected in the process of what our internal forecast structure is. That is not a forecast.

The CHAIRMAN. So there is no spoken or unspoken expectation within the Fed that inflation will be 6 percent this year and that is being conveyed to foreign finance minister?

Mr. GREENSPAN. It certainly has not been conveyed in any sense that I am aware of other than by somebody misspeaking because it is not factually the case.

The CHAIRMAN. So that is not the internal view of the Federal Reserve in terms of the inflation expectations?

Mr. GREENSPAN. It is not, sir.

The CHAIRMAN. Thank you.

Senator Graham.

Senator GRAHAM. Mr. Chairman, I have no further questions. I appreciate the excellent testimony of the Chairman and hope that in the near future you will get some political support to match the monetary leadership that you have given.

The CHAIRMAN. Chairman Greenspan, we thank you very much. You have been very patient and forthcoming as always. We appreciate your testimony.

The committee stands in recess.

[Whereupon, at 12:15 p.m., the committee was recessed, to reconvene at 10:00 a.m., Wednesday, February 22, 1989.]

[Response to written questions of Chairman Riegle follow:]

Chairman Greenspan subsequently submitted the following in response to written questions from Chairman Riegle in connection with the hearing held on February 21, 1989:

Question 1: The economic assumptions submitted with the budget this year show a decline in inflation over the next 5 years to a 1.8 percent rate, while economic growth averages 3 to 3.5 percent. The Fed's central tendency inflation projection for next year is 4.5 to 5 percent. Is it likely that inflation can be reduced 3 percentage points so painlessly?

Answer: One might argue that this long-run scenario is optimistic, but there certainly are circumstances in which it could be realized. Two key considerations are (1) whether we can achieve growth in labor productivity more in line with the experience earlier in the post World War II period, and (2) whether we can maintain policies that provide people with some assurance that the government will remain committed to restoring price stability over time.

Question 2: You have stated that current inflation rates cannot be acceptable indefinitely. What is an acceptable rate, and how soon do you expect to reach it?

Answer: I have emphasized the importance of reducing the rate of inflation to a level at which it no longer has economic significance -- that is, one so low that people no longer feel the need to make any allowance for inflation in their decisions about purchasing real or financial assets. I'm not sure what, in terms of our conventional price indexes, that translates into quantitatively, but I think we must at

this point take as our working assumption that it is a number approximating zero. As to a timetable, it is clear that we can't achieve price stability overnight without undue wrenching of the economy; however, if we do not have at least a rough sense that we want to achieve this objective within several years, it will lose operational significance and have little, if any, of the favorable expectational effect that it might otherwise have.

Q.3. In response to a question from Senator Heinz, you expressed some confidence that long-term real interest rates have risen over the past year in response to your increases in short-term rates. Long-term real rates can be computed in many ways. How are the rates you use computed, and can you give us the estimates for the past decade?

Long-term real interest rates are difficult to determine precisely because long-term inflation expectations are not directly observable. Using survey data of market participants' long-term inflation expectations, long-term real interest rates appear to have risen over the past year as expectations of long-term inflation rates have dropped while nominal long-term interest rates have been about stable. Table 1 shows the results of a survey published by Drexel Burnham Lambert, which gathers responses from financial market participants to questions concerning expected inflation rates for the next 12 months, 5 years, and 10 years; the chart in the lower panel shows recent 10-year real interest rates based on the responses to this survey and average monthly 10-year Treasury note rates. As shown in the table, expected 10-year inflation rates have declined from 5.3 percent in January of 1988 to 4.7 percent in February of 1989 (the last

available survey). The chart shows that long-term real interest rates have risen since 1986 but currently are not as high as they were in the early 1980s and in 1984.

Another technique sometimes used to proxy inflation expectations is to assume such expectations are formed by extrapolating past inflation rates. Table 2 uses both 12- and 20-quarter moving averages of past inflation rates (using the PCE deflator) as proxies for expected future inflation rates to estimate long-term real interest rates. Using this proxy, real interest rates are unchanged or up slightly from early 1988, and are appreciably above their levels of the first half of 1987, though they have declined from the peaks reached in the last half of 1987.

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Question 4: You stated that the unified budget is the best measure of the federal government's impact on national savings, and that you believe we should generally have a unified budget surplus to increase national savings. Would you agree that the surplus should be bigger during periods when the Social Security trust fund is growing -- that we ought to be saving more when our workforce is bulging with baby boomers who expect to receive large benefits in the future?

Answer: I have stressed the importance of a consolidated measure of the federal government's budget position because that is the appropriate index of the sector's absorption of, or contribution to, national saving. What we

should be seeking is to increase the overall level of national saving, so that we can finance added capital formation. By raising saving and investment, we can enhance our productive potential in the years ahead, and thereby make it possible for workers in future years to meet, without great sacrifice of their own living standard, the Social Security commitments made to the baby boomers.

Question 5: Typically, inverted yield curves have been followed by business recessions. Why will the relationship between the yield curve and the economy be different this time?

Answer: Over the past year, short-term interest rates have risen sharply while long-term Treasury interest rates have been stable. As a result, the Treasury yield curve has flattened considerably and is inverted between maturities of two years and thirty years. This downward sloping portion of the yield curve implies that market participants expect interest rates, including long-term rates, to decline in the future.

Although the last four recessions were all preceded by inverted yield curves, there are reasons to believe that circumstances differ today. Compared to those episodes of inverted Treasury yield curves, the recent flattening has been modest in both duration and magnitude. Indeed, three-month Treasury bill rates are still below longer-term rates. The federal funds rate (on a 365-day basis) has been above the thirty-year Treasury bond rate only since the beginning of this year, and the spread has only recently widened to

85 basis points, which is a smaller spread than observed before any recession since the 1950's. In addition, past recessions followed inversions of the yield curve by up to two years; thus, it is likely that recent movements in nominal interest rates are not a reliable predictor of economic activity, especially in the near term. Indeed, the more recent changes in the slope of the yield curve may reflect only downward revisions to longer-term inflationary expectations not predictions of a recession.

Further, new financial instruments, markets, and techniques have broadened the choices available to savers, spenders, and intermediaries for structuring their assets and liabilities. The consequences of these innovations have been to reduce the effects of liquidity constraints in financial markets and, thus, to elevate rate movements as a transmission channel for monetary policy and other influences in the economy; these developments also imply that historical associations among interest rates may be subject to change, making predictions based solely on the slope of the yield curve uncertain.

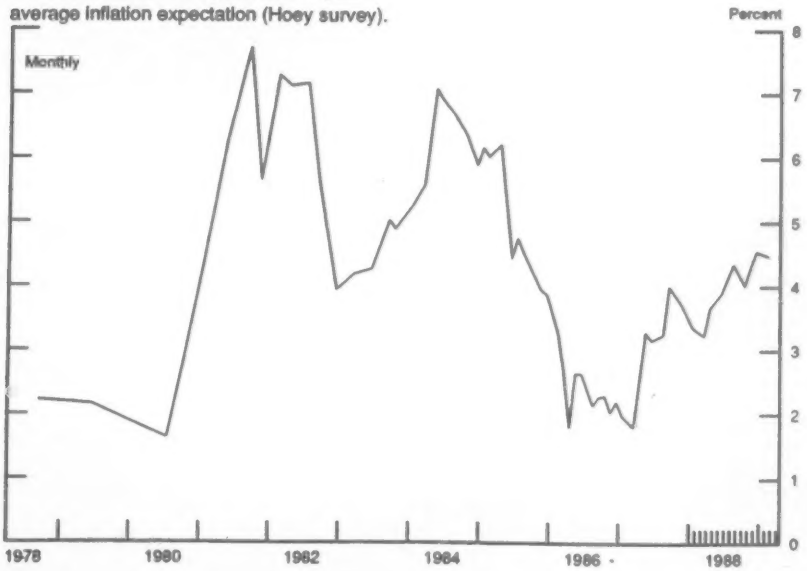
Attachments (2)

Table 1
Inflation Expectations
(Hoey Survey)

Survey Date	Next 12 months	First 5 years	Second 5 years	10-year average
	annual rate, percent			
1986: Q3	3.5	4.8	5.5	5.1
Q4	3.6	4.7	5.5	5.1
1987: January	3.8	4.9	5.4	5.1
March	4.0	5.2	5.8	5.5
May	4.7	5.3	5.4	5.3
June	4.6	5.2	5.3	5.3
August	4.9	5.4	5.7	5.5
September	4.7	5.3	5.6	5.4
November	4.1	5.0	5.3	5.1
1988: January	4.5	5.2	5.5	5.3
March	4.3	5.0	5.3	5.2
April	4.7	5.1	5.0	5.1
June	5.1	5.1	4.9	5.0
August	5.3	5.1	4.8	4.9
October	4.9	4.7	4.9	4.8
November	4.8	4.6	4.7	4.7
December	5.0	4.6	4.6	4.6
1989: February	5.3	4.7	4.7	4.7

ESTIMATED REAL INTEREST RATE

10-year Treasury bond yield less 10-year average inflation expectation (Hoey survey).



Monthly observations for survey months; last observation is February 1989.

Table 2

REAL AND NOMINAL INTEREST RATES[1]
(Long-term Treasury bond, in percent)

	Real rate (Alternative A)[2]	Real rate (Alternative B)[3]	Nominal bond rate
1979:Q1	2.2	1.9	9.0
Q2	1.8	1.9	9.1
Q3	1.3	1.8	9.0
Q4	2.1	2.8	10.1
1980:Q1	3.2	4.2	11.7
Q2	2.0	2.8	10.5
Q3	2.0	3.1	10.9
Q4	2.9	4.2	12.1
1981:Q1	2.9	4.3	12.5
Q2	3.8	4.9	13.3
Q3	4.8	5.7	14.1
Q4	4.6	5.4	13.8
1982:Q1	5.0	5.6	14.0
Q2	5.0	5.4	13.5
Q3	4.7	4.6	12.8
Q4	3.1	2.7	10.8
1983:Q1	3.8	2.8	10.7
Q2	4.2	3.0	10.6
Q3	5.7	4.2	11.6
Q4	6.3	4.4	11.7
1984:Q1	7.1	5.0	12.0
Q2	8.6	6.4	13.1
Q3	8.4	6.3	12.7
Q4	7.7	5.7	11.7
1985:Q1	7.8	6.0	11.6
Q2	7.2	5.7	11.0
Q3	7.0	5.6	10.6
Q4	6.5	5.4	10.0
1986:Q1	5.4	4.6	8.8
Q2	4.4	3.6	7.5
Q3	4.3	3.7	7.4
Q4	4.5	4.0	7.5
1987:Q1	4.3	3.9	7.5
Q2	5.2	4.9	8.5
Q3	5.6	5.5	9.1
Q4	5.7	5.7	9.2
1988:Q1	5.2	5.1	8.6
Q2	5.4	5.5	9.1
Q3	5.4	5.6	9.2
Q4	5.2	5.3	9.0

1. All interest rate and inflation readings are quarterly averages.
2. Alternative A is expected inflation measured by a 12-quarter moving average of past inflation (PCE deflator).
3. Alternative B is expected inflation measured by a 20-quarter moving average of past inflation (PCE deflator).

Chairman Greenspan subsequently submitted the following in response to a written question from Senator Sarbanes in connection with the hearing held on February 21, 1989:

Question 1: The Federal Reserve's Monetary Policy Report to Congress is made pursuant to the Full Employment and Balanced Growth Act of 1978, 12 U.S.C. 225(a). Last year's trade bill, the Omnibus Trade and Competitiveness Act of 1988, 22 U.S.C. 5306, amended the 1978 Act to read as follows:

"In furtherance of the purposes of the Full Employment and Balanced Growth Act of 1978, the Board of Governors of the Federal Reserve System shall transmit to the Congress, not later than February 20 and July 20 of each year, independent written reports setting forth (1) a review and analysis of recent developments affecting economic trends in the nation, including an analysis of the impact of the exchange rate of the dollar on those trends".

The language that was added to the Act is underlined. The February 21 Monetary Policy Report's section on "The External Sector" does include some analysis of the effect of the exchange rate on the U.S. external accounts such as the trade and the current account. However, the Congress also intended that the analysis of the exchange rate extend to the effects on other economic trends central to the purposes of the Humphrey-Hawkins legislation - growth, inflation, employment, income, and investment. Please comment on the impact of the exchange rate on these measures of economic performance.

More specifically, from mid-1986 to mid-1988, improvement in the real trade balance contributed positively to overall GNP growth and stimulated increases in investment and employment in goods industries. The real trade balance worsened in the last two quarters of 1988. What role did the exchange rate play in the recent deterioration and in the earlier improvement? How important is the trend in the real trade balance to overall growth, investment, and employment? The report notes some acceleration of domestic inflation. How much of the recent acceleration of inflation do you trace to movements in the exchange rate?

Answer: In describing the recent performance of the U.S. economy, the February 21 Monetary Policy Report to Congress noted that the gain in U.S. price competitiveness resulting from the earlier depreciation of the dollar, efforts at controlling costs, and increases in productivity accounted for much of the strong growth in exports during the first half of 1988. While net exports weakened somewhat toward the end of the year, there was enough impetus from other sectors to keep real GNP on a firm upward course. The report also noted that the direct effect of rising import prices on domestic inflation was less pronounced in 1988 than it had been in 1987, although higher import prices probably influenced pressures on domestic prices in some areas.-

Several more specific questions asked about the relationships among exchange rates, net exports, growth and inflation:

Effect of Exchange Rates on Real Net Exports During 1986-88. The depreciation of the dollar through 1987 (along with improved U.S. domestic price, cost, and productivity performance) probably accounted for much of the overall improvement in net exports between mid-1986 and mid-1988. However, the very rapid pace of expansion of exports during the first half of 1988 was considerably faster than most analysts and models had anticipated.

The substantial slowing of the growth of both exports and net exports after mid-1988 could have reflected a number of factors. Earlier movements in exchange rates probably continued to have a significant net positive effect on the real trade balance, despite the rise in the dollar around mid-year. Most empirical models suggest that changes in exchange rates continue to affect trade flows for at least two to three years, and the rise in the dollar during 1988 was small relative to the decline over the preceding two years and came relatively late in the period. Nevertheless, it is generally believed that the effects of exchange rate changes do tend to diminish over time. The slowing of U.S. external adjustment since mid-1988 may have reflected, at least to a small degree, a decline in this positive effect. Other factors that could have contributed to the modest widening of the real trade balance include: (1) the slowing of domestic demand in certain foreign markets towards the end of 1988, (2) emerging capacity constraints in several U.S. manufacturing sectors, and (3) timing factors, such as the bunching of orders for agricultural commodities by the Soviet Union and China into the first half of 1988, a pickup in imports late in the year from certain Asian countries facing a removal of GSP privileges at the end of 1988, and a surge in imports of petroleum as oil prices bottomed out. These and other timing factors probably accounted for much of the shift in the pace of external adjustment between the first half and the second half of 1988.

Effect of Real Net Exports on Growth, Investment, and Employment. Between mid-1986 and mid-1988, the increase in real net exports accounted directly for about 20 percent of the total increase in GNP. However, the importance of the expansion of exports alone as an "exogenous" stimulus to output and employment during this period was probably greater than this 20 percent figure suggests. The growth in exports undoubtedly had "multiplier" effects on domestic consumption and investment (particularly on investment in the manufacturing sector). On the other hand, the effects of the expansion in exports on the real trade balance was partly offset by an induced increase in imports. If GNP had grown 20 percent less than it did from mid-1986 to mid-1988 (that is, if GNP growth had been about 3/4 percentage point per year lower than it was), then as a very rough estimate, the unemployment rate by mid-1988 might have been as much as 3/4 percentage point higher than it was.

Effect of Exchange Rates on the Increase in Inflation. Movements in dollar exchange rates probably contributed no more than 1/4 percentage point to the pickup in inflation during 1988 through their direct impact on import prices. Only about half to three-fourths of the movement in exchange rates, on average, normally is passed through to import prices, and some of the effects of the dollar's earlier depreciation were offset by the appreciation during 1988. The full effects of the dollar on the pickup in inflation may be somewhat greater when one factors in the indirect effects

through the stimulus of real net exports to aggregate demand, and through reduced pressures on U.S. prices and wages arising from reduced competition from foreign goods.

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